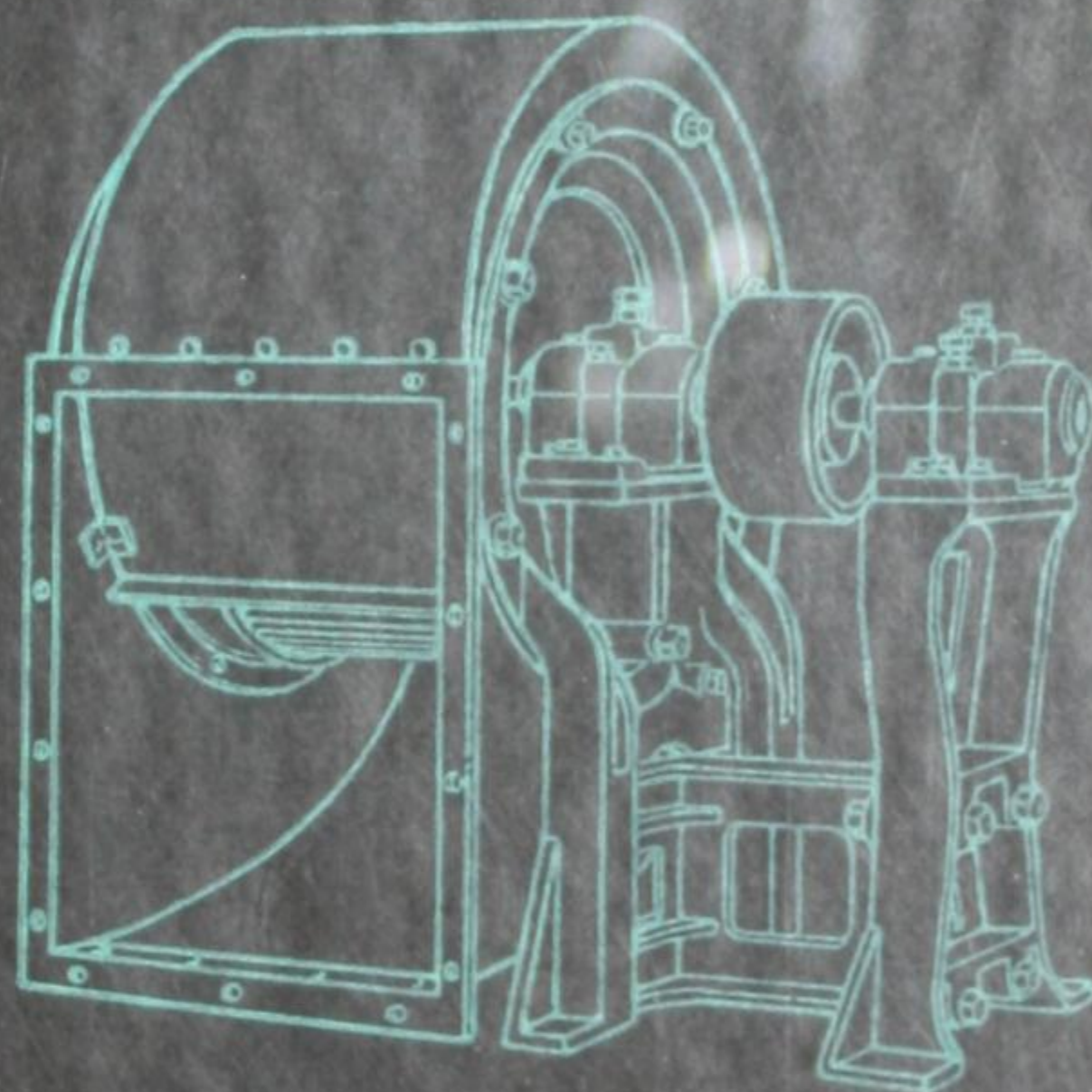
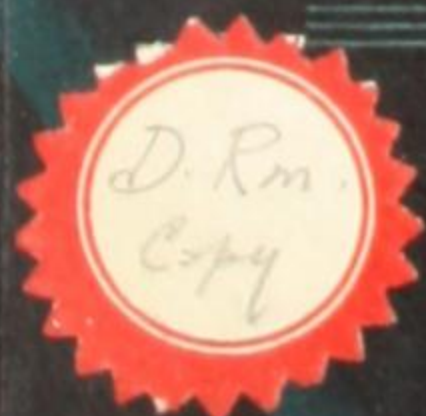


# CYCLONE FANS



**MATTHEWS & YATES LTD**  
**ENGINEERS • SWINTON**  
**MANCHESTER ENGLAND**



*Supplied  
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PRINTED IN ENGLAND

# CYCLONE FANS

ENGINEERING EQUIPMENT CO.  
LIMITED

SALES ENGINEERS

Suite 420, New Birks Bldg. - MONTREAL

*Ernest Rolland,*

*LA.1823.*

ENGINEERING EQUIPMENT CO.  
LIMITED  
SALES ENGINEERS  
Suite 420, New Birks Bldg. - MONTREAL

**MATTHEWS & YATES LTD.**

**SWINTON : : MANCHESTER**

**CHIEF OFFICE & WORKS, SWINTON, MANCHESTER**

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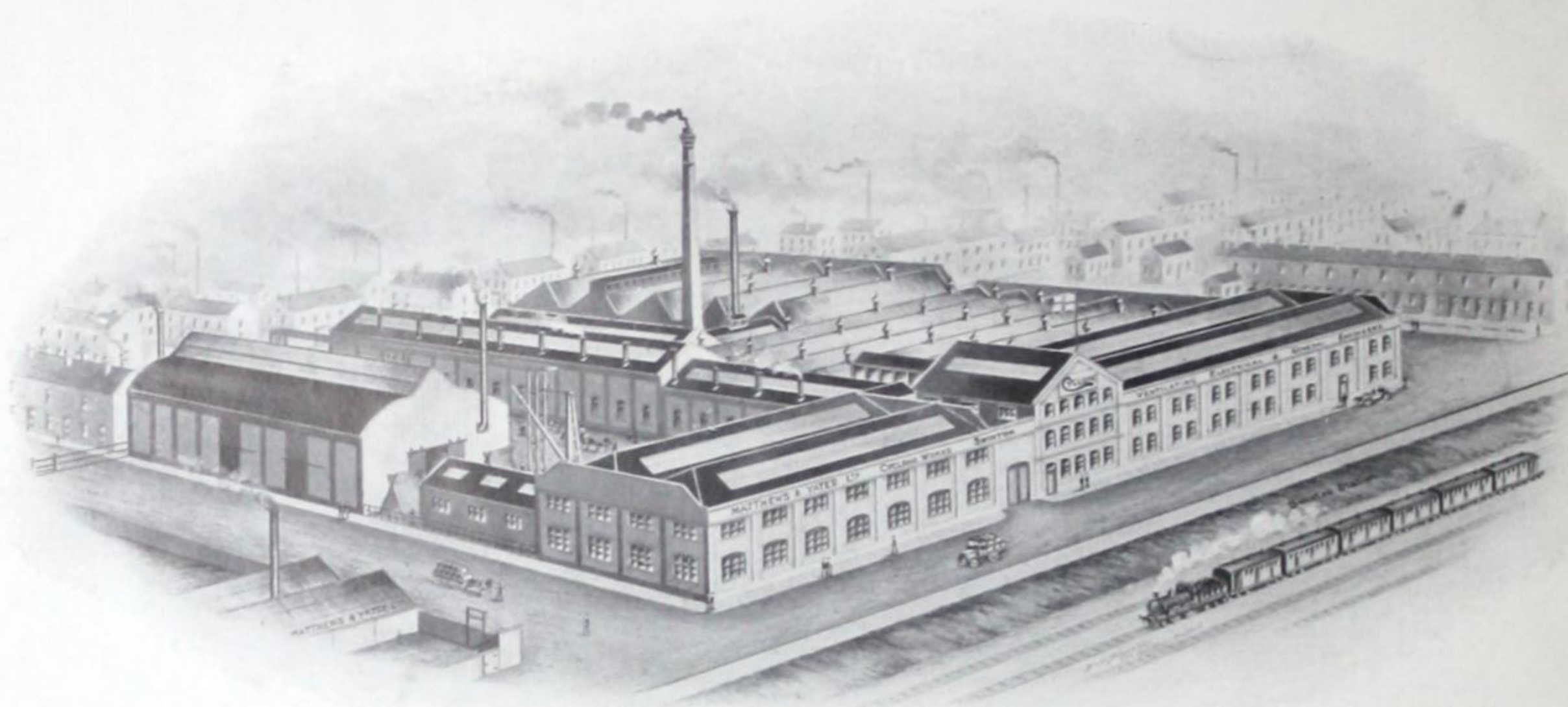
PHONE CENTRAL 0988

ALSO AT LEEDS AND CARDIFF.

For Complete Index  
to this Brochure  
see page 120.



# CYCLONE



THE CYCLONE WORKS  
WHERE ALL FANS DETAILED IN  
THIS CATALOGUE AND MANY  
OTHER SPECIALITIES ARE PRODUCED

MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.

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January, 19



# **CYCLONE**

## **FOREWORD**

**W**HEN a firm has been established for over fifty years it is perhaps an opportune time to review its history. The business began in a small way in Manchester in the year 1882 when Mr. William Matthews and Mr. Joseph Yates formed a partnership to carry out contracts in Heating and Gas Lighting.

A year or two later Mr. Walter Yates, who had designed and patented the Cyclone Air Propeller, joined the firm and added mechanical ventilation to the operations of the Company.

By 1890 the Cyclone Works at Swinton had been built to accommodate the large increase in the demand for Fans of various kinds and other specialities which were continually being introduced.

One of the early uses to which Cyclone Fans were put was in connection with Humidifiers for moistening the air in Textile Works, and another early use was to provide the fresh air in Plenum Ventilating and Heating Plant for public buildings of various kinds. These led to a development of the Cyclone Air Conditioning Plant, and it is interesting to note that as early as 1905 Matthews & Yates Ltd. had installed a large equipment in the House of Commons. This was followed immediately, as the result of its satisfactory performance, by a Plant for the air conditioning of the private apartments of the late King Edward at Buckingham Palace, since which many plants have been installed in this country and abroad.

When Matthews & Yates began operations Mechanical Ventilation was in its infancy. A demand for Fans had to be created by providing a supply and designing methods for their use.

Matthews & Yates Ltd. are proud to have been pioneers in the design, construction and application of Fans for every conceivable purpose. They claim to be still in the forefront with Fans of the highest efficiency, due to maintaining a permanent Research Department where not only Fans but various articles used in conjunction with them, such as Heaters, Air Washers, Viscous Filters, etc., are constantly being improved upon in efficiency, construction and adaptability.

A conspicuous example of this is the S.S. or Slow Speed Multivane Fan, which gives an exceptionally high efficiency, and the H.S.C.B. or High Speed Curved Back Fan, also highly efficient, which, by its special design, overcomes the risk of overloading the driving Motor.

And further, the Cyclone Patent Laminated Fan Casing which has done so much to reduce the noise usually associated with Centrifugal Fans.

Our purpose is to serve our customers to the best of our ability and all we ask is the opportunity to do so.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND,**



## **CYCLONE**

### **CENTRIFUGAL FANS**

**W**E make three types of Centrifugal Cased Fans—Paddle Blade, S.S. Multivane (low peripheral speeds) and H.S. Curved Back (high peripheral speeds).

The purpose of this catalogue is to supply information that will assist in selecting the proper type and size of equipment for given requirements.

In Fans it describes the mechanical construction of the Fan components; has complete performance tables giving air output, resistance and velocity head data, together with the necessary dimensions; in fact, all the engineering data necessary for the adaptation of Fans to any ventilating or air distribution problem.

The Paddle Blade Fan was the first to be introduced some forty years ago and was used for all purposes where pressure as well as volume was required. It has given place to the Multivane Fan in most cases where clean or comparatively clean air is to be moved. But it still stands supreme where air charged with abrasive material, fluff, or such as wood refuse is to be dealt with. There are only a few straight radial blades on the runner and so choking can not take place.

The Cyclone S.S. Multivane Fans and H.S. Curved Back Fans are designed in accordance with modern practice as standardised by leading manufacturers of air moving apparatus; and embody the improvements our long experience in the production and use of Fans has determined, together with relatively small housings and large inlets and outlets, such as are generally approved by Engineers and Architects.

The Impeller is built up on a centralized hub, driving through the impeller's centre of gravity, which reduces the overhang to 50% of that of other types built up on a cone and backplate. This construction dispenses with heavy unwieldy impeller parts and gives a proper distribution of the stresses set up by a rapidly revolving impeller.

All Cyclone productions embody the results of upwards of fifty years of intimate and practical experience. The greatest care has been taken to embody all the salient improvements that make an up-to-date and efficient equipment; at the same time novelties have been avoided. Durability and sound constructional design has had first and last consideration.

The values given in the performance tables are guaranteed within the tolerance adopted by the Fan Standardisation Committee.

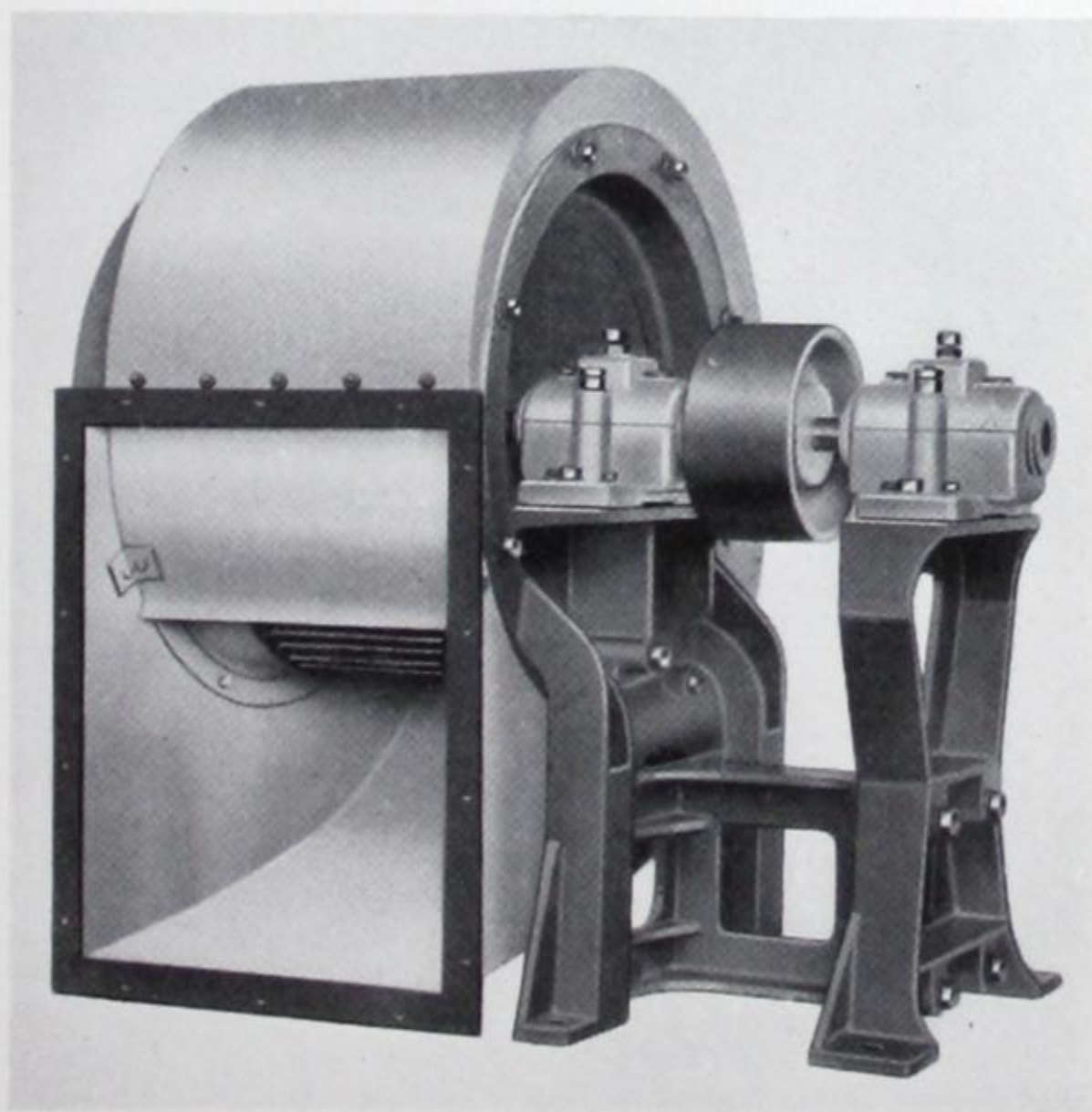
**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**CYCLONE**

**S·S**  
**FANS**

**S S**  
**LOW SPEED**  
**MULTIVANE**  
**FANS**



S.S. Multivane Fan No. 20 to 60 Construction.  
Pulley Side. With Standard Ring Oiling Bearings.  
Arrangement No. 3.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



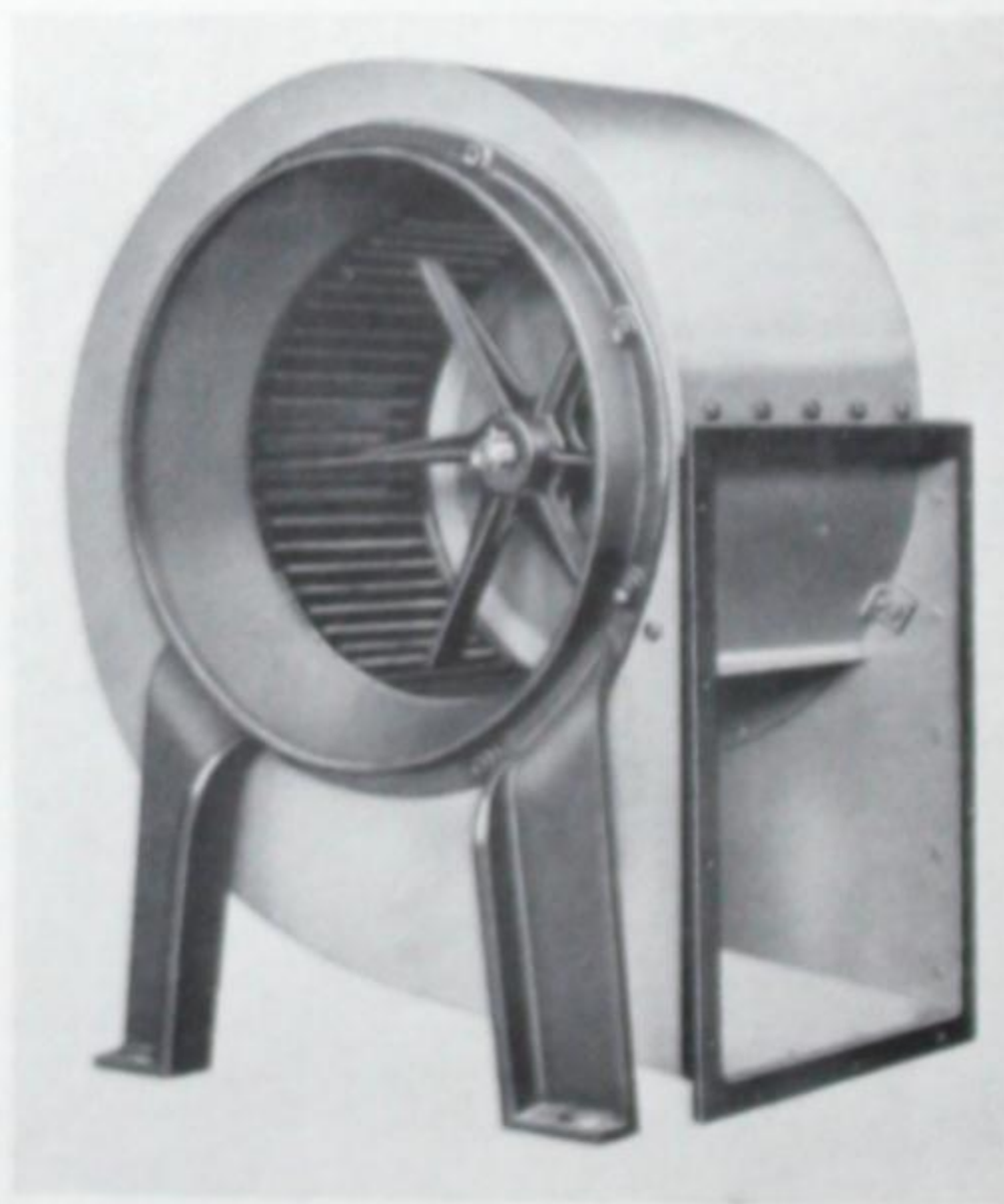
## S.S. MULTIVANE FANS

covering all requirements of  
VENTILATION, HEATING & AIR CONDITIONING.

**T**HIS Fan is designed and built specifically to meet the requirements of Architects and Engineers and, as with all Cyclone Fans, can be specified with full confidence that a better Fan, more efficient or durable, at any price, cannot be procured. It combines compactness, high efficiency, quietness, and low power consumption. Sturdy and dependable in construction, it is made in a range of sizes to cover every requirement encountered in ventilation and Air Conditioning work.

Sizes 20 to 60 inclusive are built with a steel scroll, welded to steel side plates, into which are fitted heavy cast iron side frames containing the inlet cone and bearing stool, ensuring perfectly rigid support to the impeller, shaft and bearings. **The side frames allow the fan to be fixed in any one of eight directions of air discharge, either clockwise or counter-clockwise.**

The openings in the Fan housing receiving the side frames are larger in diameter than the impeller, and allow it to be easily removed from the housing for cleaning and inspection.



S.S. Multivane Fan No. 20 to 60 Construction, Inlet Side.  
With Standard Ring Oiling Bearing.  
Arrangement No. 3.  
For dimensions see pages 76 to 90.

MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



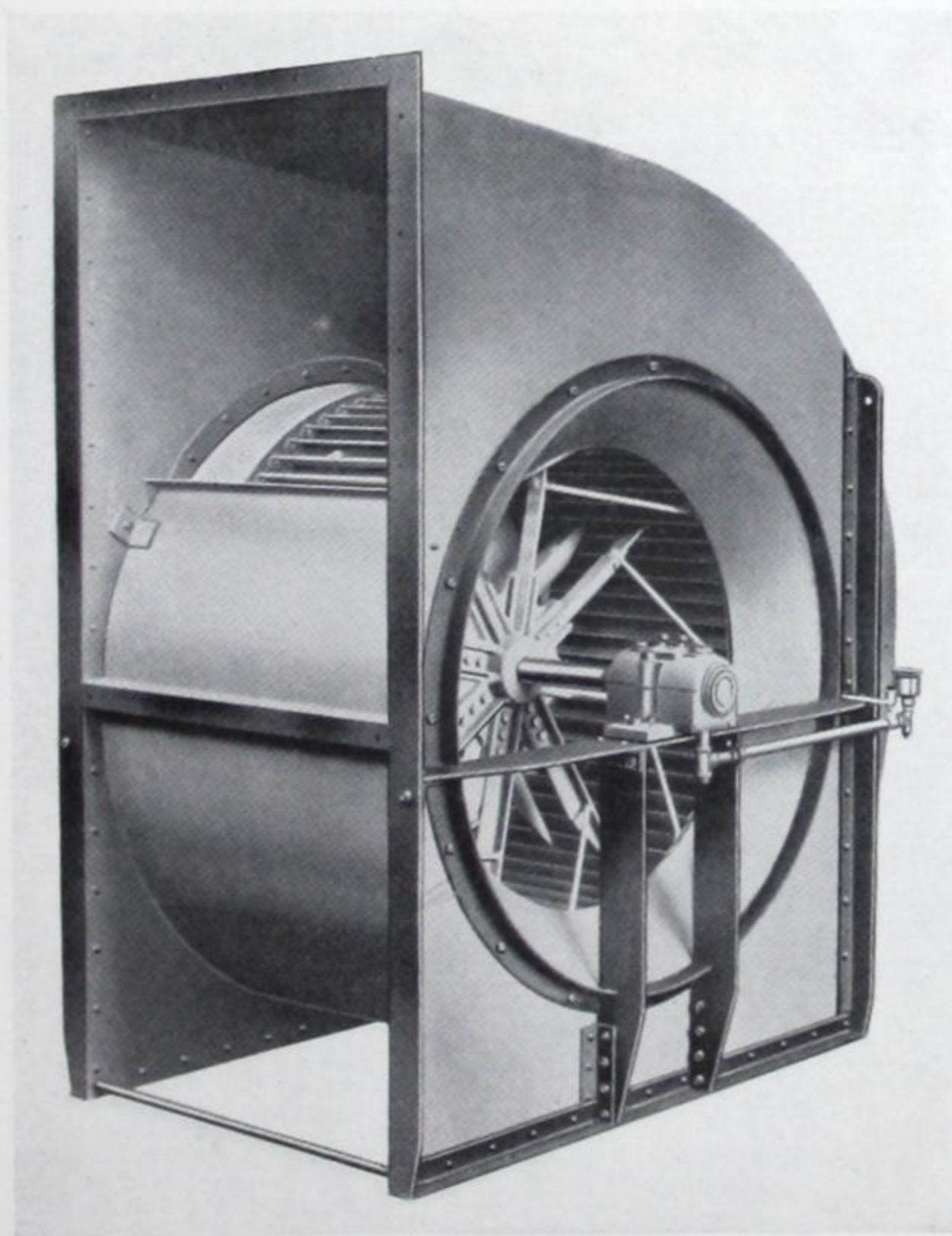
## **CYCLONE**

**S·S  
FANS**

**I**N the larger sizes 70 and upwards the Fans are built to meet the requirements of the installation, and the fan housings are constructed entirely in heavy steel plate, rigidly braced by steel sections to prevent "breathing." The built-up structure supporting the bearings is given special consideration and the vertical supports are carried to the floor line.

All Plates and sections of the fan housings are rivetted and bolted together (not welded as in the smaller sizes), and the fan housing can be so constructed that it may be easily taken apart to gain entrance through comparatively small openings. The impeller, however, cannot be dismantled.

Where silence is essential, our patented **laminated casings** have proved very effective in stopping "drumming." In fact, in most instances where these particular casings have been adopted and the fans run at a reasonable speed, they could not be heard at all.



S.S. Multivane Fan. Construction 70 and upwards. (Type R.5).  
Inlet Side. With Standard Ring Oiling Bearing.  
Arrangement No. 1.

For dimensions see pages 76 to 90.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## **CYCLONE**

**T**HE impeller is the "Forward Curved Multivane" Type with 60 or 64 blades according to Fan size and is the type most commonly used in heating and ventilating work, because of its low peripheral speed, large capacity and quietness in operation. This Fan is also used in manufacturing processes, drying systems, forced and induced draught systems.

The impeller is driven through its centre of gravity by means of a centrally placed hub, a most important feature if the Fan is to be free from vibration and noiseless when running.

For Fan sizes up to and including size 60 the impeller hub and spider is an alloy steel casting in one piece, and is carefully tested and inspected before it is built into the impeller.

In larger impellers, of Fan sizes 70 and upwards, the impeller hub consists of a steel alloy casting centre to which radial arms are securely attached, and the whole is rigidly stayed by diagonal rods which safely absorb all shock and inertial loads.



S.S. Multivane Impeller 20 to 60 Construction.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



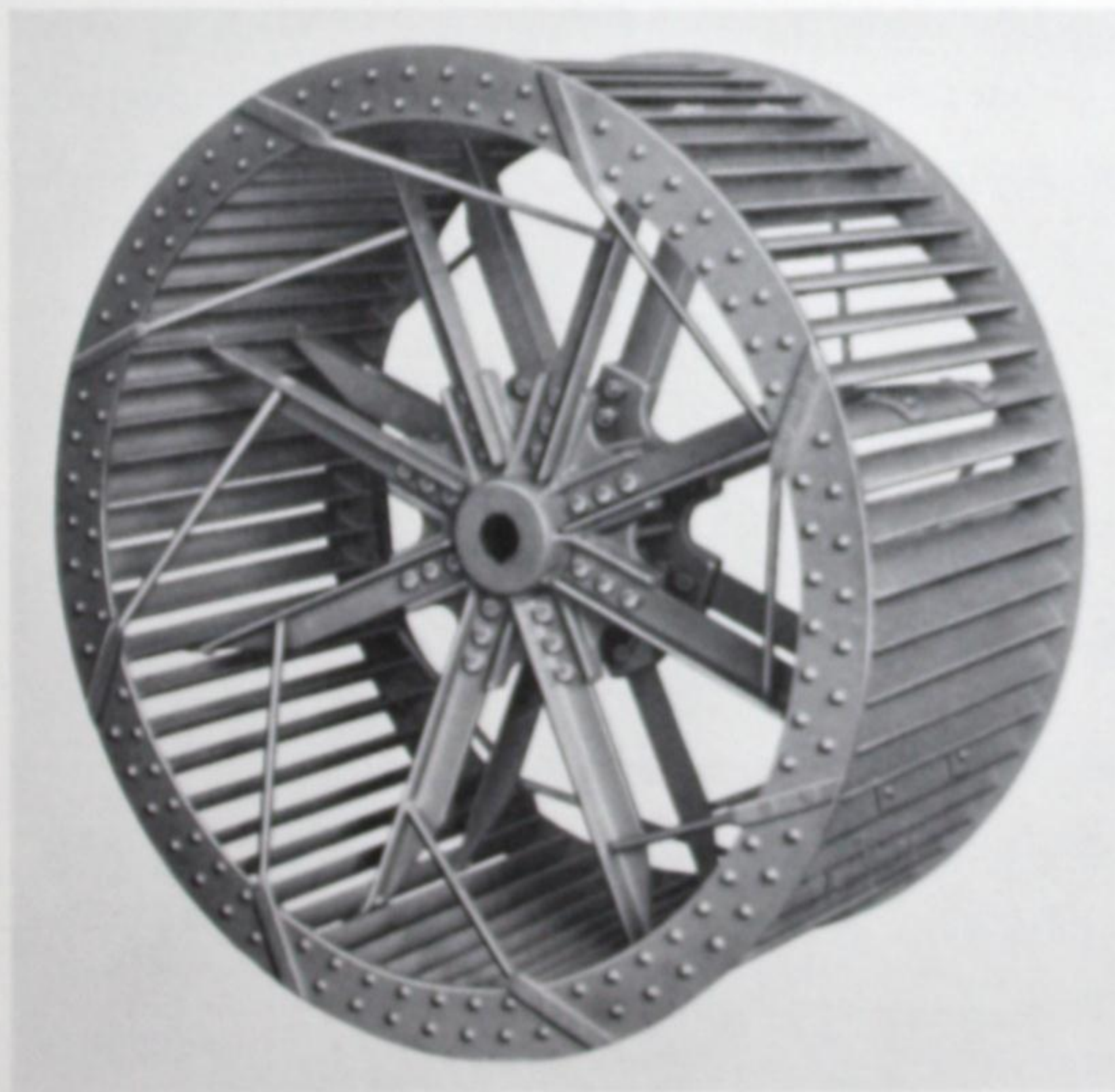
**FANSHAFTS**

**F**ANSHAFTS are made from best quality steel bar, accurately ground to size. Each shaft is properly proportioned and is of such a diameter that the first critical speed is not reached with the impeller running at maximum recommended speed.

**BEARINGS**

In all Centrifugal Fans the point of greatest wear and tear occurs in the bearing, and only bearings specially designed for the peculiarly arduous duty are suitable for fan work. The use of ball bearings for fan work is frequently banned on the score of noise; often the real trouble is not so much the ball bearing as bad impeller design and construction, with faulty shaft support.

We do not suggest that ball bearings can take the place of the properly designed sleeve bearing, where absolute quietness of operation is essential, but because ball bearings need so little attention they should be carefully considered, and it will be found that they can most advantageously be used for a large number of the purposes to which Multivane Fans are put.



S.S. Multivane Impeller. Construction 70 and upwards.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



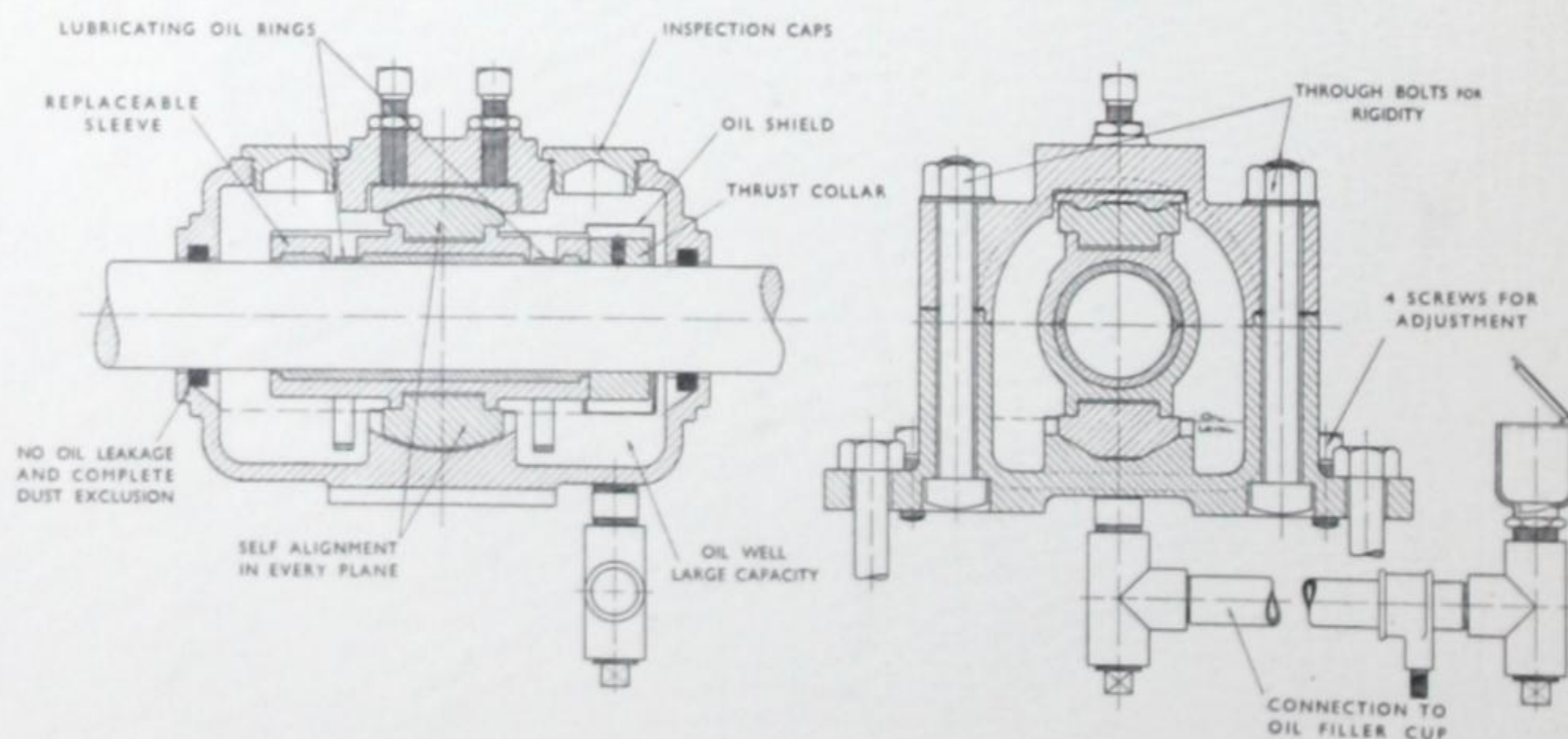
## **CYCLONE**

**T**HE Cyclone standard babbitted inner sleeve ring oiling bearing, consists of an inner malleable iron sleeve, lined with best grade babbitt, and a heavy outer cast iron casing. The inner sleeve is split and may be easily removed or replaced.

The sleeve is supported in the outer casing on heavy pivotal top and bottom blocks so designed that a universal movement allows the inner sleeve to take up any position required in the shaft alignment. The bearing is self-aligning in all planes.

An exceptionally large oil well is provided in the bottom of the bearing. A tinplate shield covers the thrust collar which prevents oil being thrown on to the top half of the housing, thus avoiding leakage through the housing joint.

Large felt washers are fitted into recesses at the ends of the housing, effectively keeping dust, etc., from entering the bearing and stopping oil creep along the shaft.



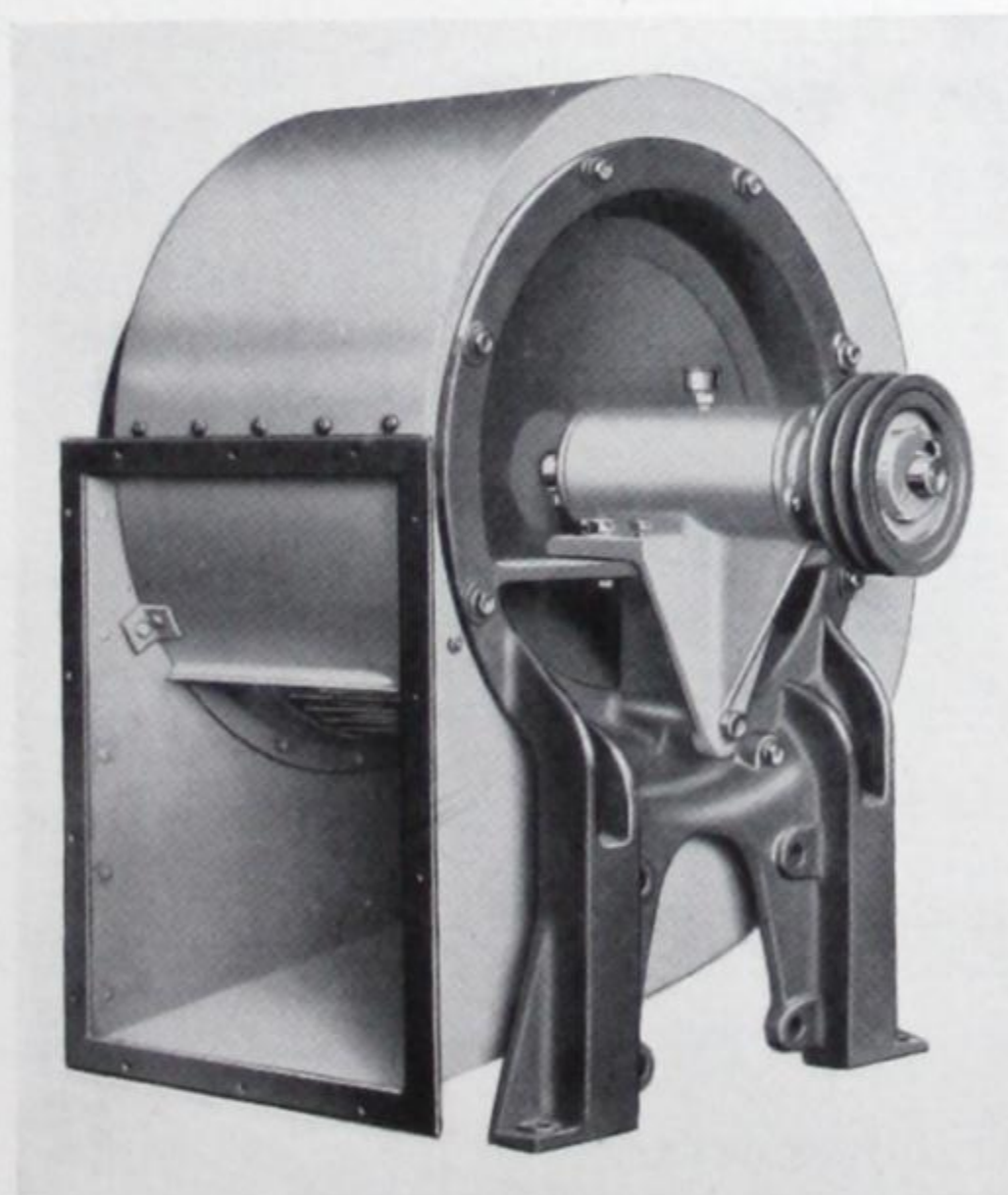
Cyclone Ring Oiling Self-aligning Babbitted Bearing.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



A standard ball-bearing equipment for single width, single inlet S.S. Multivane Fans up to and including Size 50 is shewn in arrangement No. 2 below. It will be seen that the adapter housing is bolted directly on to the bearing support carried on the heavy cast iron side frame. The double housing, projecting into the cone, reduces the impeller overhang to a minimum and the load is taken by and immediately over the feet of the side frame.

The double ball-bearing housing consists of a rigid cast iron sleeve with supporting base and stiffening arm, accurately machined to receive the ball bearings and end caps. The latter (as in the case of the standard babbitted sleeve ring oiling bearing) is fitted with substantial felt washers, which lie snugly round the shaft at each end of the housing.

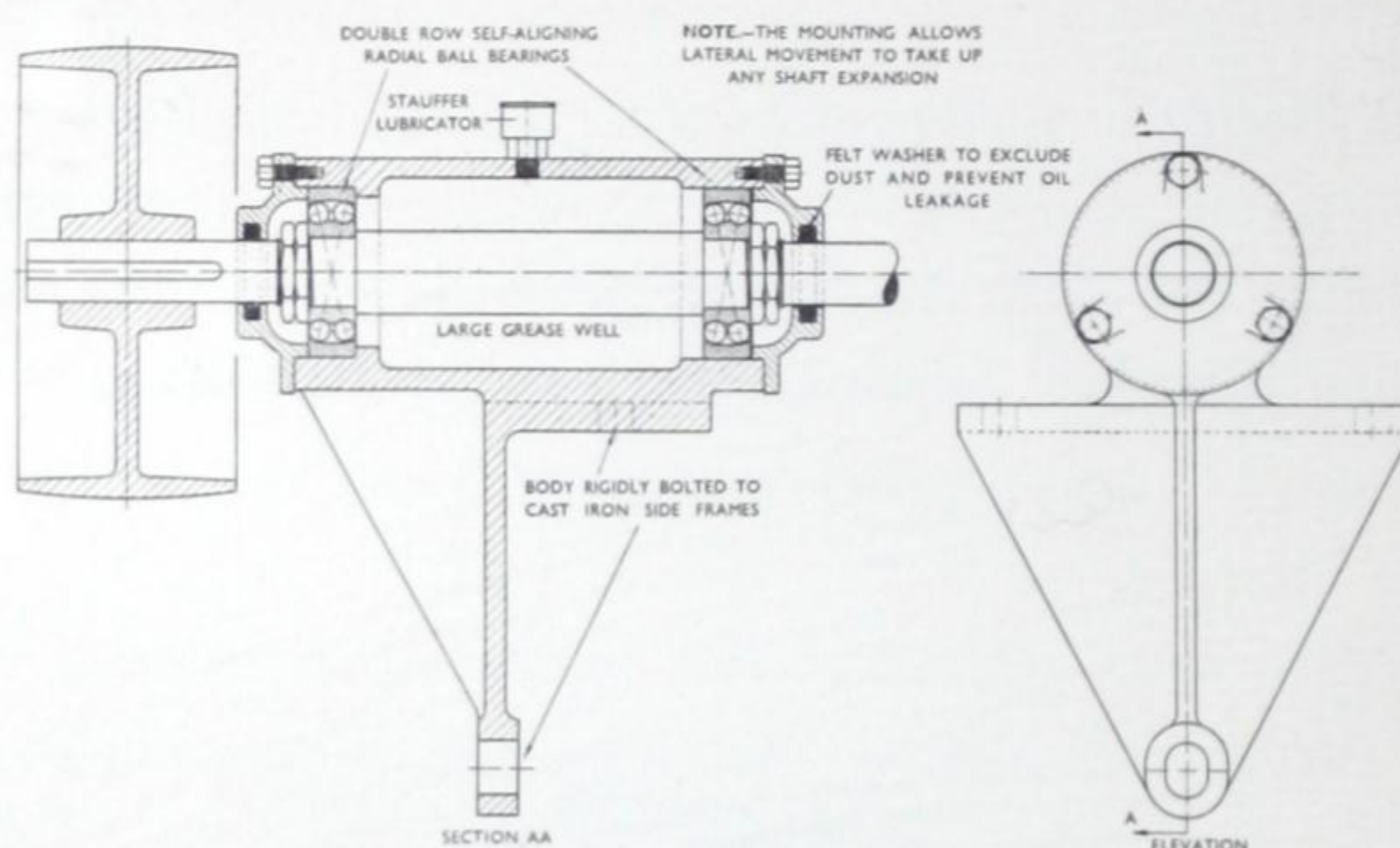


S.S. Multivane Fan with Double Ball-bearing  
Housing for Construction 20 to 60 sizes. Type R.1.  
Arrangement No. 2.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



These felt washers prevent the escape of oil or grease and protect against the entrance of dirt. The ball bearings are mounted with lateral freedom in the housing. They are large and substantial in design, to adequately deal with all radial and thrust loads.



Section of Double Ball-bearing Housing.

**“S.S.” Multivane Fans are furnished in single or double-width of any required arrangement and drive.**

A staff of Engineers is always at your service whenever special requirements—not covered by the data given in this book—are to be met. Without obligation, an Engineer will submit a complete recommendation and cost estimate covering equipment to meet your requirements.

Standard specifications on the several types of Fans are prepared for use of Architect and Engineer.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## **S.S. MULTIVANE FAN PERFORMANCE TABLES**

ALL OUR TABLES ARE BASED ON STANDARD AIR AT 60 DEGS. F. AND 70% RELATIVE HUMIDITY AND A BAROMETRIC PRESSURE OF 30" Hg.

**I**N the Performance Tables, pages 14 to 29, it will be found that there are several sizes of Fans that will perform a given duty, and that the range covers practically any installation.

Generally, the important factors in selecting Fans for ventilating systems are efficiency and noise. First cost and space available are usually secondary. If an efficient and noiseless Fan is the essential, select the Fan size that meets the requirement when operating at the highest point of efficiency. If first cost has to be considered, or space is limited, it may become necessary to select a Fan of lower efficiency. Fans are specially designed by us to meet abnormal conditions.

The Report of the Fan Standardisation Committee under fan performance states: "It must be clearly understood that the performance of a fan is not fully represented by the volume per minute and the resistance head." Of course it is not, but the velocity head, if it is adventured as supplementing the duty the fan is able to perform, becomes usually more misleading than useful.

Owing to the uncertainty of friction losses which occur at points of varying velocities in the ducting of most installations, the amount of velocity head which is actually utilised is seldom known, and the static pressure or resistance head alone best represents the useful pressure for this type of fan.

**Our Performance Tables are, therefore, based on the actual delivery at the resistance head shown, and are correct under the conditions specified.**

The total fan head is readily obtained by adding to the resistance head the velocity head or pressure corresponding to the outlet velocity given in the third column.

For notes on "How to Select a Cyclone Fan," see pages 93 to 96.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**S.S. MULTIVANE FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

**1,500 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1742	·190	620	·23	669	·26	707	·28	744	·31	785	·35	821	·37	859	·41
25	1120	·078	380	·13	429	·16	474	·19	522	·23	572	·26				

**2,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2325	·338			848	·57	878	·60	915	·64	938	·67	968	·71	1022	·78
25	1490	·139	446	·25	488	·28	523	·32	558	·36	599	·40	631	·44	669	·50
30	1035	·067	306	·16	349	·20	386	·27								

**2,500 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2920	·532							1069	1·14	1098	1·18	1149	1·30	1196	1·38
25	1860	·216			560	·48	588	·51	610	·56	648	·62	675	·67	706	·72
30	1286	·104	340	·27	377	·31	411	·36	447	·41	484	·48	516	·53	549	·59

**2,750 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	3200	·642							1136	1·42	1176	1·51	1220	1·60	1264	1·70
25	2050	·263			622	·65	648	·70	681	·75	709	·81	731	·86	783	·98
30	1420	·126	361	·32	395	·36	429	·42	455	·48	492	·55	521	·60	550	·68
35	1045	·068	264	·22	300	·29	328	·35								

**3,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2230	·311			662	·83	686	·85	716	·92	737	·95	760	1·02	806	1·22
30	1550	·151	380	·39	415	·45	445	·50	474	·56	505	·62	531	·68	558	·75
35	1140	·081	274	·27	309	·34	340	·41	375	·48	408	·54	436	·63	470	·71

**3,250 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2415	·364					722	1·02	752	1·09	770	1·15	793	1·21	834	1·34
30	1680	·177	403	·48	437	·54	462	·55	488	·64	518	·72	541	·78	567	·85
35	1235	·095	281	·32	320	·39	348	·45	380	·52	412	·60	439	·66	471	·76

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

### 3,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2607	.425							786	1.34	802	1.36	822	1.43	867	1.56	915	1.73
30	1810	.205			459	.65	482	.70	505	.77	532	.85	556	.93	581	.99	629	1.15
35	1330	.111	298	.38	329	.45	358	.51	384	.58	417	.68	444	.73	471	.83	527	1.03
40	1018	.065	228	.27	260	.35	288	.46	318	.54								

### 3,750 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2780	.482							817	1.59	836	1.60	858	1.67	898	1.80	943	1.96
30	1940	.236			477	.76	502	.82	524	.90	551	.96	577	1.05	598	1.14	640	1.26
35	1427	.127	310	.45	339	.51	368	.57	390	.65	422	.75	448	.81	473	.92	527	1.10
40	1090	.074	234	.32	265	.41	293	.50	322	.58	355	.67						

### 4,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2977	.555									869	1.87	891	1.94	918	2.12	971	2.26
30	2070	.268					521	.95	544	1.02	568	1.10	592	1.18	612	1.27	654	1.40
35	1522	.145	322	.50	352	.58	378	.66	402	.73	430	.81	453	.89	478	1.00	528	1.18
40	1165	.085	241	.36	272	.44	297	.52	326	.61	357	.72	380	.80	410	.95		

### 4,250 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	3170	.628									907	2.18	935	2.30	970	2.44	1007	2.57
30	2200	.302					544	1.12	563	1.17	587	1.25	608	1.32	627	1.42	667	1.55
35	1618	.164	336	.58	365	.68	389	.75	414	.81	439	.92	460	.99	481	1.07	530	1.28
40	1232	.095	248	.41	278	.51	303	.59	332	.68	360	.80	383	.87	411	.99	460	1.25

### 4,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	3350	.701									974	2.61	1010	2.80	1044	2.98	1072	3.10
30	2323	.338					566	1.28	586	1.35	612	1.44	628	1.50	648	1.62	684	1.77
35	1710	.183	351	.69	379	.76	400	.84	422	.92	447	1.02	467	1.10	488	1.21	531	1.39
40	1307	.107	257	.48	284	.57	309	.65	335	.73	364	.86	387	.95	411	1.05	460	1.32
45	1032	.066	203	.35	231	.45	255	.56	282	.66	310	.79						

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

4,750 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2450	-376																						
35	1805	-204			392	-87	413	-94	433	-103	455	-113	477	-125	498	-134	539	-154	586	-179	623	-200	665	-225
40	1380	-119	266	-55	292	-62	318	-70	337	-80	367	-94	390	-103	411	-116	460	-140	505	-165				
45	1093	-075	207	-39	235	-52	260	-63	286	-72	315	-83												

5,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2580	-416																						
35	1900	-226			403	-98	424	-106	444	-115	467	-125	487	-134	508	-148	543	-166	592	-192	631	-211	665	-234
40	1455	-133	274	-61	300	-69	323	-77	344	-87	371	-100	392	-109	414	-126	460	-148	507	-174	545	-208		
45	1150	-083	213	-44	240	-57	263	-67	290	-78	316	-90	336	-101	364	-120								

5,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2840	-505																						
35	2085	-272																						
40	1600	-160	291	-73	316	-87	338	-95	360	-104	382	-118	400	-128	418	-138	463	-166	507	-200	544	-228		
45	1260	-099	183	-43	209	-54	231	-72																

6,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	3105	-602																						
35	2280	-326																						
40	1745	-190	311	-96	336	-105	354	-114	373	-126	394	-139	410	-152	430	-165	466	-190	509	-225	544	-250		
45	1380	-119	235	-68	258	-77	281	-88	298	-101	324	-117	344	-128	364	-143	407	-175						
50	1120	-078	190	-52	215	-67	238	-80	261	-94	286	-108												

6,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	3370	-710																						
35	2470	-382																						
40	1890	-224			352	-126	370	-136	387	-148	407	-162	423	-175	442	-191	474	-216	516	-250	550	-274		
45	1492	-140	246	-80	269	-91	288	-103	308	-116	331	-130	348	-143	369	-160	407	-191	448	-225	485	-270		
50	1212	-092	198	-61	222	-77	243	-87	265	-104	288	-121	306	-130	330	-152								
55	1003	-063	164	-48	188	-61	212	-75	236	-96	259	-116												

MATTHEWS &amp; YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**S.S.**  
**FANS**

## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

### 7,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	2670	·446							568	2·72	580	2·80	594	2·94	627	3·21	658	3·53
40	2030	·258							423	1·88	440	2·04	455	2·17	488	2·42	526	2·77
45	1608	·162	259	·94	281	1·10	300	1·22	320	1·33	339	1·50	354	1·62	372	1·76	410	2·11
50	1303	·106	205	·72	227	·86	247	1·00	268	1·13	291	1·32	309	1·45	330	1·62	368	2·05
55	1080	·073	170	·59	191	·73	214	·89	237	1·07	259	1·25						

### 7,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	2855	·510							603	3·24	620	3·44	650	3·73	678	4·03	704	4·28
40	2180	·297							453	2·31	468	2·48	498	2·72	535	3·13	564	3·47
45	1720	·185	274	1·15	293	1·27	311	1·40	327	1·53	347	1·71	362	1·85	380	2·02	412	2·33
50	1397	·122	215	·86	236	·97	256	1·10	271	1·27	294	1·48	312	1·62	330	1·83	368	2·21
55	1160	·084	176	·68	196	·77	216	1·00	238	1·20	260	1·34	278	1·45				

### 8,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	3050	·572							628	3·80	645	4·00	674	4·33	700	4·60	724	4·85
40	2325	·338							469	2·70	484	2·88	512	3·16	546	3·54	575	3·88
45	1838	·211			306	1·50	323	1·61	338	1·77	355	1·94	372	2·12	388	2·28	418	2·60
50	1490	·139	223	·99	244	1·11	261	1·27	279	1·43	299	1·60	316	1·77	335	1·97	369	2·35
55	1232	·095	181	·80	201	·86	220	1·09	240	1·21	260	1·47	279	1·53	300	1·90		
60	1032	·066	153	·63	175	·80	193	1·00										

### 8,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	3230	·651							677	4·72	705	5·02	728	5·28	749	5·55	777	5·93
40	2472	·383							498	3·24	525	3·55	557	3·95	583	4·28	608	4·62
45	1955	·239			317	1·71	333	1·85	353	2·02	367	2·18	381	2·35	397	2·55	425	2·85
50	1585	·158	231	1·10	252	1·32	270	1·45	287	1·61	305	1·80	320	1·96	336	2·12	371	2·55
55	1308	·107	187	·90	207	·98	225	1·23	243	1·40	261	1·59	281	1·72	300	2·06	334	2·41
60	1100	·076	157	·72	178	·93	196	1·13	217	1·32	238	1·51						

### 9,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2620	·430							491	3·41	502	3·51	513	3·68	541	4·03	571	4·44
45	2070	·267							377	2·47	392	2·64	406	2·83	435	3·13	468	3·60
50	1675	·176	242	1·31	261	1·47	277	1·62	293	1·78	311	2·00	325	2·17	340	2·35	371	2·75
55	1383	·120	194	1·01	213	1·14	229	1·37	246	1·55	264	1·74	283	1·92	301	2·19	334	2·60
60	1162	·085	161	·81	182	1·04	199	1·20	220	1·43	239	1·64	254	1·73	275	2·06		

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



**S·S**  
**FANS**

**CYCLONE**

**S.S. MULTIVANE FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**9,500 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

BAROMETRIC PRESSURE 30" Hg																												
Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2770	·479									506	3·88	516	3·97	530	4·15	556	4·50	583	4·90	605	5·23	630	5·62	679	6·38	729	7·23
45	2185	·300					358	2·45	372	2·56	388	2·77	401	2·91	416	3·13	442	3·43	474	3·94	500	4·37	523	4·81	577	5·73	630	6·70
50	1770	·196	252	1·50	271	1·67	286	1·81	300	2·00	316	2·21	331	2·43	346	2·60	375	3·00	409	3·54	436	3·95	465	4·47	517	5·53	575	6·70
55	1462	·134	201	1·16	219	1·25	235	1·51	251	1·70	267	1·90	285	2·20	302	2·32	335	2·77	367	3·34	394	3·92						
60	1228	·094	165	·90	185	1·13	202	1·29	221	1·52	240	1·76	255	1·94	275	2·21												

**10,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2915	·531											533	4·50	547	4·70	574	5·10	598	5·48	619	5·82	645	6·22	691	6·99	738	7·89
45	2300	·331					373	2·78	386	2·92	402	3·13	413	3·27	427	3·50	451	3·85	482	4·35	506	4·79	529	5·23	582	6·16	632	7·16
50	1860	·216			280	1·91	294	2·06	308	2·25	324	2·47	338	2·68	353	2·90	379	3·30	413	3·82	436	4·22	465	4·72	518	5·87	572	7·10
55	1540	·149	208	1·34	225	1·42	240	1·67	256	1·87	272	2·06	288	2·32	303	2·46	335	2·96	367	3·52	395	4·15						
60	1300	·106	170	1·05	189	1·24	206	1·44	222	1·62	242	1·90	257	2·10	275	2·33	306	2·94										

**11,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	3200	·640											568	5·70	588	6·04	610	6·39	632	6·73	650	7·10	676	7·60	713	8·40	757	9·33
45	2526	·400							411	3·69	426	3·97	436	4·10	448	4·33	471	4·75	498	5·26	520	5·64	542	6·10	590	7·11	638	8·13
50	2050	·263					311	2·59	324	2·79	341	3·00	354	3·22	366	3·44	392	3·95	423	4·40	446	4·89	470	5·38	518	6·55	571	7·94
55	1700	·181	222	1·77	238	1·84	252	2·04	267	2·27	281	2·48	294	2·79	310	2·92	338	3·47	368	4·00	395	4·64	423	5·30				
60	1420	·126	181	1·28	198	1·45	214	1·65	228	1·88	246	2·17	261	2·38	276	2·69	306	3·21	338	3·78								
70	1047	·068	129	·87	148	1·13	167	1·42	185	1·72	204	1·87																

**12,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	2760	·476											449	4·93	458	5·05	470	5·27	493	5·70	517	6·22	536	6·65	560	7·12	603	8·10
50	2235	·312					331	3·21	342	3·36	357	3·62	368	3·79	380	4·07	403	4·88	432	5·10	456	5·65	477	6·17	520	7·30	571	8·52
55	1848	·214			251	2·31	265	2·52	279	2·70	292	2·93	303	3·21	318	3·41	344	3·82	370	4·47	396	5·02	423	5·63	473	7·21		
60	1552	·151	191	1·53	208	1·78	222	2·00	237	2·22	252	2·48	265	2·71	280	2·99	308	3·56	338	4·24	365	4·96						
70	1138	·081	134	1·05	150	1·36	169	1·62	186	1·88	204	2·11	218	2·35														

**13,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	3000	·562											482	6·10	490	6·40	504	6·97	537	7·40	557	7·84	579	8·36	618	9·35	660	10·6
50	2420	·366							361	4·07	376	4·35	385	4·55	397	4·83	417	5·32	443	5·93	464	6·44	484	7·00	531	8·17	574	9·48
55	2000	·250					282	3·06	293	3·23	306	3·44	316	3·74	328	3·95	352	4·51	376	5·00	400	5·67	425	6·26	474	7·69	519	9·36
60	1680	·176	202	1·91	218	2·12	232	2·35	244	2·58	259	2·89	271	3·12	284	3·40	309	3·97	338	4·77	365	5·37	388	6·06				
70	1232	·095	139	1·29	155	1·58	172	1·84	187	2·02	204	2·37	219	2·64	235	2·99												

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

### 14,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH						
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP					
45	3215	·652																																											
50	2608	·426																																											
55	2165	·293																																											
60	1808	·204																																											
70	1325	·110	145	1·49	161	1·76	175	1·97	190	2·25	204	2·58	219	2·93	233	3·24	264	4·03	289	4·82																									
80	1018	·065	112	1·08	129	1·37	146	1·78	162	2·13	179	2·34																																	

### 15,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH						
			1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH						
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP					
50	2798	·490																																											
55	2315	·335																																											
60	1940	·235																																											
70	1420	·126	151	1·76	165	2·03	179	2·24	193	2·63	207	2·93	220	3·25	233	3·52	262	4·31	288	5·09																									
80	1087	·074	116	1·23	131	1·62	147	1·97	162	2·37	179	2·58																																	

### 16,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH						
			1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH						
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP					
50	2980	·555																																											
55	2470	·382																																											
60	2060	·265																																											
70	1515	·144	157	1·99	171	2·28	184	2·55	196	2·95	211	3·24	223	3·62	233	3·87	261	4·60	287	5·36																									
80	1162	·085	119	1·45	133	1·86	148	2·20	163	2·50	179	2·87	190	3·15																															

### 17,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH							
			1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH		7" RH		7 1/2" RH		8" RH		8 1/2" RH		9" RH		9 1/2" RH		10" RH							
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP						
50	3170	·630																																												
55	2620	·428																																												
60	2200	·303																																												
70	1615	·163	162	2·22	178	2·63	190	2·95	203	3·25	216	3·67	226	4·10	236	4·30	261	5·17	286	5·75																										
80	1232	·095	122	1·70	136	2·07	150	2·40	167	2·65	179	3·10	191	3·45	205	3·91	232	4·90																												

### 18,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH		7" RH		7½" RH		8" RH		8½" RH		9" RH		9½" RH		10" RH						
			RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP						
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP					
50	3350	·700																																											
55	2780	·484																																											
60	2325	·336																																											
70	1706	·182	168	2·54	183	2·90	195	3·18	206	3·71	219	4·03	228	4·30	240	4·66	263	5·40	286	6·24	309	7·15	333	8·20	377	10·4																			
80	1308	·106	126	1·88	141	2·23	153	2·50	167	2·85	179	3·25	191	3·73	204	4·15	231	5·20	253	6·18																									
90	1033	·067	100	1·40	115	1·80	130	2·30	140	2·76																																			



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

19,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	2930	.538											392	9.32	402	9.51	420	9.98	437	10.5	454	11.2	471	12.0	503	13.7	537	15.1
60	2450	.375							303	6.09	316	6.53	324	6.84	332	7.17	350	7.94	372	8.80	388	9.54	406	10.3	443	12.1	480	13.9
70	1802	.203	174	2.90	189	3.33	199	3.70	210	4.01	223	4.44	233	4.75	244	5.07	266	6.02	286	6.77	309	7.65	331	8.70	375	10.9	415	13.2
80	1380	.118	130	2.15	143	2.43	155	2.73	168	3.15	180	3.62	192	4.05	204	4.42	230	5.45	253	6.48								
90	1092	.075	103	1.55	116	2.05	131	2.49	144	3.00	158	3.25																

20,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	3085	.595									406	10.6	416	10.8	432	11.4	450	11.8	466	12.6	482	13.3	513	15.1	545	16.6		
60	2590	.420							313	6.85	325	7.40	333	7.61	340	8.02	358	8.78	379	9.70	394	10.4	411	11.2	447	13.0	483	14.8
70	1898	.225			195	3.70	206	4.12	216	4.48	227	4.95	238	5.27	248	5.65	268	6.54	287	7.30	309	8.24	330	9.25	373	11.4	414	13.6
80	1455	.132	134	2.39	146	2.74	158	3.05	170	3.45	182	3.94	194	4.34	204	4.74	229	5.74	252	6.74	274	8.10						
90	1152	.083	105	1.79	118	2.31	132	2.74	145	3.15	158	3.66																

21,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		3/4" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH					
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
55	3250	.660									420	12.0	430	12.4	446	13.0	462	13.3	477	14.0	493	14.8	523	16.6	552	18.3		
60	2715	.461								335	8.37	342	8.61	351	9.00	369	9.80	387	10.7	402	11.4	419	12.3	453	14.6	485	16.0	
70	1992	.249			201	4.12	212	4.55	223	5.00	232	5.44	243	5.97	252	6.30	271	7.03	290	8.07	309	8.91	332	10.0	370	12.1	410	14.2
80	1522	.145	138	2.60	152	3.10	162	3.40	174	3.90	185	4.28	196	4.71	205	5.10	228	6.08	251	7.04	273	8.42						
90	1210	.091	107	2.03	119	2.54	132	2.97	145	3.24	158	3.85	170	4.21	182	4.82												

22,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	3400	.722									444	13.9	460	14.6	475	14.9	490	15.5
60	2842	.506							352	9.63	361	10.0	379	10.9	395	11.7	411	12.8
70	2085	.271			219	5.12	228	5.56	238	6.04	249	6.52	258	6.94	276	7.81	294	8.73
80	1600	.160	141	2.82	155	3.35	165	3.79	177	4.13	188	4.69	197	5.17	206	5.52	228	6.55
90	1264	.100	110	2.23	123	2.69	134	3.07	147	3.44	158	4.00	170	4.52	181	5.08	206	6.37
100	1023	.065	88	1.69	104	2.17	116	2.79	129	3.36								

23,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	2975	-552							361	10.6	370	11.1	388	12.1	403	13.0	418	13.8
70	2180	-297			225	5.68	233	6.12	243	6.63	253	7.06	262	7.57	281	8.54	297	9.36
80	1680	-176	145	3.15	158	3.65	168	4.02	179	4.56	190	5.06	198	5.46	210	5.90	230	6.86
90	1320	-109	112	2.44	125	2.87	136	3.22	148	3.69	159	4.21	170	4.81	181	5.32	205	6.61
100	1070	-072	91	1.82	104	2.40	117	2.98	129	3.59	143	4.00					225	7.82

MATTHEWS &amp; YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

### 24,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3100	·601																
70	2268	·321																
80	1740	·190	150	3·52	163	4·04	172	4·43	182	5·00	193	5·48	202	5·86	212	6·30	231	7·40
90	1380	·119	115	2·71	126	3·13	138	3·48	149	4·08	160	4·58	171	5·11	181	5·56	205	6·87
100	1115	·079	94	2·02	105	2·68	118	3·21	130	3·81	143	4·20						

### 25,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3230	·652																
70	2370	·351																
80	1820	·207	154	3·90	167	4·43	176	4·93	185	5·36	196	5·92	205	6·32	215	6·76	233	7·98
90	1430	·128	118	2·96	129	3·38	140	3·75	150	4·40	161	4·90	172	5·44	181	5·87	204	7·16
100	1160	·084	95	2·27	106	2·92	119	3·45	130	3·90	143	4·50	152	4·96	165	5·71		

### 26,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3350	·696																
70	2470	·382																
80	1892	·225			170	4·77	180	5·31	188	5·80	198	6·42	208	6·82	217	7·30	236	8·46
90	1495	·140	120	3·20	132	3·63	142	4·00	152	4·75	163	5·20	172	5·71	181	6·22	204	7·45
100	1205	·091	96	2·51	107	3·15	119	3·67	131	4·02	143	4·77	153	5·22	165	5·97		
110	1000	·062	80	1·95	94	2·48	106	3·25	118	3·91								

### 27,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2580	·416																
80	1955	·240			174	5·14	183	5·75	193	6·32	202	6·91	211	7·49	219	7·93	237	9·00
90	1552	·151	124	3·39	135	3·96	145	4·42	155	5·00	165	5·56	173	6·13	182	6·60	204	7·87
100	1258	·099	98	2·70	110	3·30	121	3·77	132	4·20	143	4·91	153	5·53	165	6·21		
110	1038	·067	81	2·09	94	2·70	106	3·45	118	4·13								

### 28,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2660	·442																
80	2030	·257																
90	1610	·162	127	3·63	137	4·33	147	4·83	157	5·30	167	5·99	175	6·57	183	7·03	203	8·33
100	1303	·106	101	2·90	113	3·45	123	3·90	133	4·45	144	5·10	154	5·80	164	6·48	184	8·10
110	1080	·073	83	2·30	94	2·92	107	3·60	118	4·30	130	4·80						

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

# CYCLONE

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

29,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH											
			RPM		BHP		RPM		BHP		RPM		BHP		RPM		BHP		RPM		BHP							
70	2750	-473																										
80	2110	-279					191	6.85	201	7.05	281	11.2	288	12.0	296	12.3	312	13.7	325	14.5	340	15.8	354	16.9	380	19.2	409	21.6
90	1665	-173	129	3.98	140	4.62	149	5.08	159	5.60	209	8.05	218	8.65	226	9.20	242	10.3	258	11.5	273	12.6	291	14.1	324	16.8	357	19.7
100	1348	-114	102	3.17	114	3.71	124	4.14	133	4.78	169	6.38	176	6.88	185	7.43	204	8.68	222	10.0	240	11.6	260	13.2				
110	1110	-077	85	2.48	95	3.23	107	3.88	118	4.60	144	5.42	154	6.13	164	6.72	184	8.33	202	9.95								

30,000 C.F.M.

[illegible]

32,000 C.F.M.

[illegible]

34,000 C.F.M.

[illegible]

36,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		5" RH		6" RH		8" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2620	-430																						
90	2070	-267																						
100	1675	-176	120	5.20	130	5.80	138	6.40	146	7.10	155	8.00	162	8.80	170	9.40	185	11.0	203	13.2	218	14.8	233	16.8
110	1383	-120	97	4.00	106	4.50	114	5.40	123	6.20	132	7.00	141	7.70	150	8.50	167	10.4	183	12.4				
120	1162	-085	81	3.20	91	4.00	100	4.80	110	5.70	119	6.50	127	7.00	137	8.00								

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.

S.S. MUL  
STANDARD  
BAROMETRI

Fan Size	Outlet Velocity ft. per min.
80	2770
90	2185
100	1770
110	1462
120	1228
130	1050

Fan Size	Outlet Velocity ft. per min.
80	2915
90	2300
100	1860
110	1540
120	1300
130	1100

Fan Size	Outlet Velocity ft. per min.
80	3050
90	2415
100	1955
110	1620
120	1360
130	1155
140	1000

Fan Size	Outlet Velocity ft. per min.
80	3200
90	2525
100	2050
110	1700
120	1420
130	1212
140	1047

MATTH



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

38,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2770	·480																
90	2185	·300																
100	1770	·196	126	6·00	135	6·60	143	7·20	150	8·00	158	8·80	165	9·70	173	10·4	187	12·0
110	1462	·134	100	4·60	109	5·00	117	6·00	125	6·80	133	7·60	142	8·80	151	9·25	166	11·0
120	1228	·094	82	3·60	92	4·50	101	5·20	110	6·00	120	7·00	127	8·00	136	8·80		
130	1050	·069	70	3·00	80	3·90	89	4·90	99	5·90								

40,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2915	·531																
90	2300	·330																
100	1860	·216			140	7·60	147	8·20	154	9·00	162	10·0	169	10·7	176	11·6	189	13·2
110	1540	·148	103	5·30	112	5·70	120	6·70	128	7·50	136	8·25	143	9·30	151	10·0	166	12·0
120	1300	·106	85	4·20	94	5·00	103	5·75	111	6·50	120	7·60	128	8·40	136	9·30	153	11·7
130	1100	·076	71	3·27	81	4·36	90	5·27	99	6·35	110	6·90						

42,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3050	·581																
90	2415	·365																
100	1955	·239			140	8·00	147	8·90	154	9·75	162	10·7	169	11·5	176	12·2	189	13·9
110	1620	·164	103	5·40	112	6·40	120	7·20	128	7·85	136	8·90	143	9·80	151	10·5	166	12·5
120	1360	·116	86	4·57	94	5·30	103	6·00	111	6·90	120	7·80	128	8·85	136	9·70	153	12·0
130	1155	·084	72	3·75	83	4·80	91	5·70	100	6·70	110	7·55	118	8·20				
140	1000	·062	63	3·16	74	4·02	83	5·28	92	6·30								

44,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3200	·640																
90	2525	·400																
100	2050	·262																
110	1700	·181	107	6·25	116	7·15	123	7·80	131	9·00	139	9·90	144	10·5	152	11·5	167	13·3
120	1420	·126	88	5·10	96	5·80	105	6·60	111	7·50	121	8·60	130	9·50	136	10·7	153	12·8
130	1212	·092	74	4·25	85	5·33	92	6·20	100	6·85	110	8·10	118	8·90	127	10·1		
140	1047	·068	64	3·45	74	4·80	83	5·60	92	6·80	101	7·40						



S.S.  
FANS

CYCLONE

# S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

46,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH
			RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
80	2240	-490														
90	2640	-435														
100	2120	-384														
110	1765	-335	110 7.00	119 7.90	126 8.70	133 9.70	141 10.4	148 11.3	154 12.2	168 14.4	182 16.4	197 18.3	211 21.2	229 26.3		
120	1485	-328	90 5.40	98 6.40	107 7.15	113 8.35	122 9.15	130 10.1	136 11.0	152 13.1	168 15.4	183 18.3				
130	1265	-300	76 4.54	84 5.42	93 6.43	101 7.20	110 8.35	118 9.45	126 10.5	143 13.1						
140	1090	-274	64 3.75	75 5.00	84 6.00	92 7.00	102 7.80									

48,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH
			RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
90	2760	-485														
100	2225	-412														
110	1848	-314														
120	1532	-351	93 4.00	101 7.00	109 8.00	116 8.88	124 10.0	130 10.8	137 12.0	152 14.0	167 16.5	181 19.1	196 22.1			
130	1320	-309	78 5.10	87 6.10	94 7.10	102 7.70	110 8.80	118 10.1	126 11.2	143 13.7						
140	1138	-280	67 4.20	75 5.44	84 6.40	93 7.50	102 8.40	109 9.20								
150	1000	-262	59 3.42	69 4.55	78 6.00	85 7.25										

50,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH
			RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
90	2875	-518														
100	2325	-438														
110	1920	-330														
120	1615	-265	95 4.40	104 7.70	110 8.70	118 9.70	125 10.7	131 11.8	137 12.4	152 14.9	167 17.0	181 19.8	196 22.9			
130	1375	-318	79 5.40	88 6.50	96 7.25	103 8.10	111 9.50	118 10.6	126 11.8	142 14.3	156 17.0					
140	1190	-288	69 4.75	77 6.00	85 7.00	93 7.70	102 8.15	109 10.0	118 11.3							
150	1020	-264	60 3.88	69 5.00	78 6.40	85 7.47										

52,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH	1" RH
			RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
90	3000	-542														
100	2420	-462														
110	2000	-350														
120	1680	-274	97 7.34	106 8.30	112 9.10	120 10.0	127 11.4	132 12.4	139 13.4	153 15.6	167 18.1	180 20.7	195 23.7	221 29.8		
130	1425	-327	82 6.12	90 7.40	97 7.80	104 8.80	112 10.0	119 11.2	126 12.1	141 14.9	155 17.4					
140	1232	-295	70 5.40	78 6.30	86 7.35	94 8.10	102 9.50	109 10.5	117 12.0							
150	1035	-267	61 4.20	70 5.51	79 6.80	86 8.07										

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.

S.S. MUL  
STANDARD  
BAROMETRI

Fan Size	Outlet Velocity ft. per min.
80	2215
100	2608
110	2165
120	1808
130	1540
140	1325
150	1160
160	1018

Fan Size	Outlet Velocity ft. per min.
100	2798
110	2315
120	1940
130	1650
140	1420
150	1240
160	1087

Fan Size	Outlet Velocity ft. per min.
100	2980
110	2470
120	2060
130	1760
140	1515
150	1320
160	1155

Fan Size	Outlet Velocity ft. per min.
100	3170
110	2620
120	2200
130	1870
140	1615
150	1405
160	1232
170	1095

MATTH



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

56,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH		12" RH		14" RH		16" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	3215	·645																										
100	2608	·425																										
110	2165	·293																										
120	1808	·204	103	8.62	111	9.85	117	10.9	124	12.0	131	13.3	137	14.4	143	15.5	155	18.0	167	21.0	180	23.4	194	26.4	219	32.7	243	38.4
130	1540	·148	85	7.02	93	8.15	99	9.15	106	10.4	114	11.5	120	12.7	126	13.7	140	16.3	155	18.9	168	22.3						
140	1325	·110	73	5.90	81	7.00	88	7.80	95	9.00	102	10.2	109	11.7	117	13.0	132	16.0										
150	1160	·084	63	5.10	71	6.50	79	7.70	86	8.80	95	10.0																
160	1018	·065	56	4.28	64	5.38	73	7.00	81	8.50																		

60,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH		12" RH		14" RH		16" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	2798	·489													199	24.1	205	25.3	210	26.0	220	28.9	229	30.5	240	33.3	250	35.7
110	2315	·332													159	18.5	166	19.7	171	20.9	183	23.4	193	25.1	203	27.8	214	30.4
120	1940	·235			115	11.4	122	12.7	128	13.9	135	15.1	140	16.4	146	17.4	158	19.9	169	22.4	180	25.0	193	28.2	216	34.6	239	40.9
130	1650	·170	89	8.10	97	9.30	103	10.5	110	11.8	117	13.1	122	14.2	128	15.3	141	17.9	154	20.6	167	23.8	180	27.4	204	34.4		
140	1420	·126	76	7.00	83	8.10	90	9.00	97	10.4	104	11.6	110	13.0	117	14.0	130	17.2	144	20.1	156	23.8						
150	1240	·096	66	6.00	74	7.32	80	8.43	87	9.35	95	11.0	102	12.3	110	13.8												
160	1087	·074	58	4.92	65	6.50	74	7.90	81	9.50	89	10.3																

64,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH		12" RH		14" RH		16" RH			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
100	2980	·552													213	29·6	217	30·5	229	33·5	237	35·7	247	38·4	256	40·5	273	45·5	291	50·8
110	2470	·381							160	20·0	165	21·4	172	22·7	177	23·9	188	25·5	197	28·0	206	31·2	216	33·6	236	39·0	257	44·8		
120	2060	·265			119	13·2	127	14·7	133	16·0	138	17·3	143	18·7	149	20·0	160	22·1	171	25·1	182	27·7	194	30·8	216	37·0	238	43·5		
130	1760	·194	93	9·60	101	11·0	107	12·2	112	13·4	119	14·8	124	15·9	130	16·9	142	20·0	154	22·8	166	25·8	179	29·4	203	36·8	224	43·5		
140	1515	·144	78	7·90	85	9·10	92	10·2	98	11·8	105	12·8	111	14·5	116	15·5	130	18·4	143	21·4	156	25·5								
150	1320	·109	68	6·85	76	8·05	82	9·00	89	10·3	95	11·8	102	13·5	109	14·9	124	18·4												
160	1162	·084	59	5·80	66	7·44	74	8·80	81	10·0	89	11·5	95	12·6																

68,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH		12" RH		14" RH		16" RH			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
100	3170	·628													221	33.5	227	34.7	237	37.8	245	40.2	255	42.9	264	45.6	279	50.4	296	56.1
110	2620	·428													179	26.0	183	27.3	193	30.0	203	31.9	212	35.0	220	37.6	239	43.0	258	49.5
120	2200	·302													148	21.0	153	22.6	164	25.6	174	27.8	184	30.6	195	33.7	216	39.6	237	46.5
130	1870	·221			104	12.4	110	13.7	116	14.9	122	16.5	127	17.6	132	18.8	144	21.9	155	24.5	166	27.7	178	31.2	202	38.9	223	46.5		
140	1615	·163	81	8.80	89	10.5	95	11.8	101	13.0	108	14.6	113	16.1	118	17.2	130	20.6	143	23.0	155	26.8	167	31.0						
150	1405	·123	71	7.80	78	9.00	83	9.97	90	11.7	96	13.2	102	14.7	109	15.9	123	19.5	135	23.0										
160	1232	·095	61	6.80	68	8.20	75	9.60	83	10.6	89	12.4	95	13.8	102	15.6	116	19.5												
170	1095	·075	54	5.60	62	7.40	69	9.00	76	10.6	84	11.7																		

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



**S.S. MULTIVANE FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**72,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	2780	.482							180	28.3	185	29.6	190	30.6	200	33.8	208	35.9
120	2325	.338							147	22.7	153	23.8	158	25.6	168	28.4	177	30.4
130	1980	.245							126	18.5	131	20.2	136	21.4	146	24.1	156	27.5
140	1706	.182	84	10.2	91	11.6	97	12.7	103	14.8	109	16.1	114	17.2	120	18.6	131	21.6
150	1485	.138	73	8.80	80	10.0	85	11.2	91	13.2	98	14.4	104	15.8	109	17.3	122	20.7
160	1308	.107	63	7.50	70	8.90	76	10.0	83	11.4	89	13.0	95	14.8	102	16.6	115	20.7
170	1160	.084	55	6.50	62	8.40	70	9.80	77	11.2	84	12.9						
180	1033	.067	50	5.60	57	7.20	65	9.20	70	11.0								

**76,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	2930	.536									191	34.0	195	34.8	205	38.4	212	40.8
120	2450	.375									158	27.1	162	28.6	172	31.6	181	33.6
130	2085	.272									134	22.5	138	23.9	149	27.0	158	30.1
140	1802	.204	87	11.6	95	13.3	100	14.8	105	16.1	112	17.7	117	19.0	123	20.4	133	24.1
150	1570	.154	75	9.62	82	11.4	87	12.7	93	14.2	100	16.0	105	17.6	110	18.8	122	22.4
160	1380	.119	65	8.60	72	9.70	78	11.0	84	12.6	90	14.4	96	16.2	102	17.6	115	21.8
170	1220	.093	57	7.45	64	9.24	71	10.7	77	11.8	84	14.0	90	15.4	97	17.4		
180	1090	.074	51	6.20	58	8.20	65	10.0	72	11.8								

**80,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3085	.595									197	38.0	201	39.1	211	42.8	218	45.5
120	2590	.420									163	30.5	167	32.2	177	35.5	185	37.7
130	2200	.302									137	21.8	141	26.5	152	30.0	161	32.7
140	1898	.225									113	19.8	119	21.0	124	22.6	134	26.1
150	1650	.170	78	10.8	85	12.6	89	14.0	95	15.8	101	17.5	106	19.0	112	20.4	122	23.9
160	1455	.132	67	9.60	73	11.0	79	12.2	85	13.8	91	15.8	97	17.4	102	19.0	114	23.0
170	1290	.104	59	8.35	65	10.0	72	11.2	78	12.7	84	14.6	90	16.8	96	18.6		
180	1152	.083	52	7.16	59	9.24	66	11.0	72	12.6	79	14.6						

**84,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3250	.660									203	41.8	208	43.3	218	46.8	224	50.0
120	2715	.460									163	33.0	168	34.4	173	36.0	182	39.2
130	2310	.332									135	26.0	141	27.8	145	29.5	155	32.8
140	1992	.249									116	21.7	121	23.9	126	25.2	135	28.3
150	1740	.189	80	12.2	87	14.0	91	15.4	97	17.5	103	19.1	107	20.4	113	22.0	122	25.7
160	1522	.145	69	10.5	76	12.1	81	13.5	87	15.6	91	17.1	98	18.8	102	20.4	114	24.4
170	1350	.114	60	9.20	67	10.8	72	12.0	79	13.8	85	15.7	90	17.9	96	19.5	108	24.0
180	1210	.091	53	8.10	59	10.1	66	11.9	72	13.0	79	15.4	85	16.8	91	19.3		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# CYCLONE

**S.S.**  
**FANS**

## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

**88,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3400	.721																
120	2842	.505																
130	2420	.366																
140	2085	.271																
150	1820	.206	83	13.7	90	15.7	94	17.4	99	18.9	105	21.0	109	22.4	114	24.0	123	28.2
160	1600	.160	71	11.3	77	13.4	82	15.2	88	16.5	94	18.8	99	20.7	103	22.1	114	26.2
170	1415	.127	62	10.3	68	11.8	73	13.1	79	15.3	85	17.2	90	19.0	96	20.6	108	25.2
180	1264	.100	55	8.90	61	10.8	67	12.2	73	13.7	79	16.0	85	18.0	90	20.3		

**92,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	2975	.552																
130	2525	.400																
140	2180	.296																
150	1900	.225																
160	1680	.176	73	12.6	79	14.6	84	16.0	90	18.2	96	20.2	100	21.8	105	23.6	115	27.4
170	1480	.137	63	11.3	70	12.8	75	14.2	80	16.7	87	18.3	92	20.2	96	22.0	107	26.4
180	1320	.109	56	9.80	62	11.5	68	12.8	74	14.8	79	16.8	85	19.2	90	21.2	102	26.4

**96,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	3100	.600																
130	2640	.435																
140	2268	.321																
150	1985	.246																
160	1740	.189	75	14.0	81	16.1	86	17.7	91	20.0	96	21.9	101	23.4	106	25.2	115	29.6
170	1550	.150	66	12.1	72	14.1	77	15.9	82	17.9	87	19.9	92	21.9	96	23.6	107	28.1
180	1380	.119	57	10.8	63	12.5	69	13.9	74	16.3	80	18.3	85	20.4	90	22.2	102	27.5

**100,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	3230	.650																
130	2750	.482																
140	2370	.350																
150	2075	.269																
160	1820	.206	77	15.6	83	17.7	88	19.7	92	21.4	98	23.7	102	25.3	107	27.0	116	31.0
170	1610	.162	67	13.0	73	15.4	78	17.3	83	18.8	88	21.4	93	23.5	97	25.1	107	29.8
180	1430	.128	59	11.8	65	13.5	70	15.0	75	17.6	81	19.6	86	21.7	91	23.5	102	28.6

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

108,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
130	2970	·550												163	48·8	167	50·5	176	56·0	181	59·4	189	64·1	196	68·0	210	76·0	224	84·5
140	2580	·416							129	36·0	134	38·2	139	40·6	142	42·6	150	47·3	157	50·0	165	54·8	172	58·8	187	67·5	203	77·5	
150	2225	·309					106	27·7	110	29·7	115	32·0	120	34·0	123	36·4	132	41·0	140	44·7	148	48·8	156	54·1	173	63·3	189	74·1	
160	1955	·238			87	20·6	91	23·0	96	25·2	101	27·6	105	30·0	109	31·7	118	36·0	126	40·2	135	45·3	145	50·8	162	62·0	179	73·2	
170	1740	·189	71	16·0	77	18·3	81	20·2	85	22·6	91	24·8	95	26·6	100	28·5	109	33·5	118	38·1	127	43·9	137	49·7	155	62·2	172	75·8	
180	1552	·150	62	13·5	67	15·8	72	17·6	77	20·0	82	22·0	87	24·5	91	26·4	102	31·5	112	36·2	122	43·0	130	49·8					

116,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
130	3190	·635												172	57·8	175	60·1	183	65·0	189	69·4	197	74·1	204	79·0	215	87·0	229	96·7
140	2750	·482										140	45·0	144	48·0	148	49·5	156	54·8	162	58·0	170	63·3	177	67·7	190	77·0	204	86·4
150	2395	·358					112	32·6	114	35·3	119	37·7	124	40·2	128	42·5	136	47·0	143	50·0	151	55·5	158	60·0	173	70·0	189	81·0	
160	2110	·278					95	27·4	100	28·2	104	32·2	109	34·6	113	36·8	121	41·4	129	46·2	136	50·4	145	56·4	162	67·2	178	78·8	
170	1865	·217			79	21·0	84	23·4	89	25·5	94	28·2	98	30·0	102	32·1	111	37·5	119	41·8	127	47·3	136	53·3	154	66·5	171	79·8	
180	1665	·173	64	16·0	70	18·4	74	20·3	79	22·4	84	25·5	88	27·5	92	29·7	102	34·7	111	40·0	120	46·4	130	52·8					

128,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
140	3050	·580										154	59·0	158	62·0	165	68·3	170	72·5	179	77·6	185	82·7	196	92·0	209	102·5	
150	2645	·437									128	47·8	132	50·3	135	52·5	143	58·0	149	61·5	156	67·2	163	72·1	176	82·4	190	93·5
160	2325	·338				103	35·0	106	37·5	110	40·0	115	43·2	119	46·0	127	50·4	133	56·0	140	62·0	148	68·0	162	80·0	177	92·8	
170	2055	·265		84	26·8	90	29·4	94	32·1	98	34·8	103	36·5	105	40·0	113	45·0	121	50·5	128	55·5	137	62·0	153	74·2	169	87·1	
180	1838	·211		75	23·5	80	25·6	84	28·0	88	30·4	93	32·5	97	34·7	104	41·0	113	46·0	121	52·0	128	58·8	143	73·1			

144,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	2975	·552																								
160	2620	·429																								
170	2320	·336																								
180	2070	·268																								

MATTHEWS &amp; YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## S.S. MULTIVANE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

160,000 C.F.M.

## PERFORMANCE TABLES

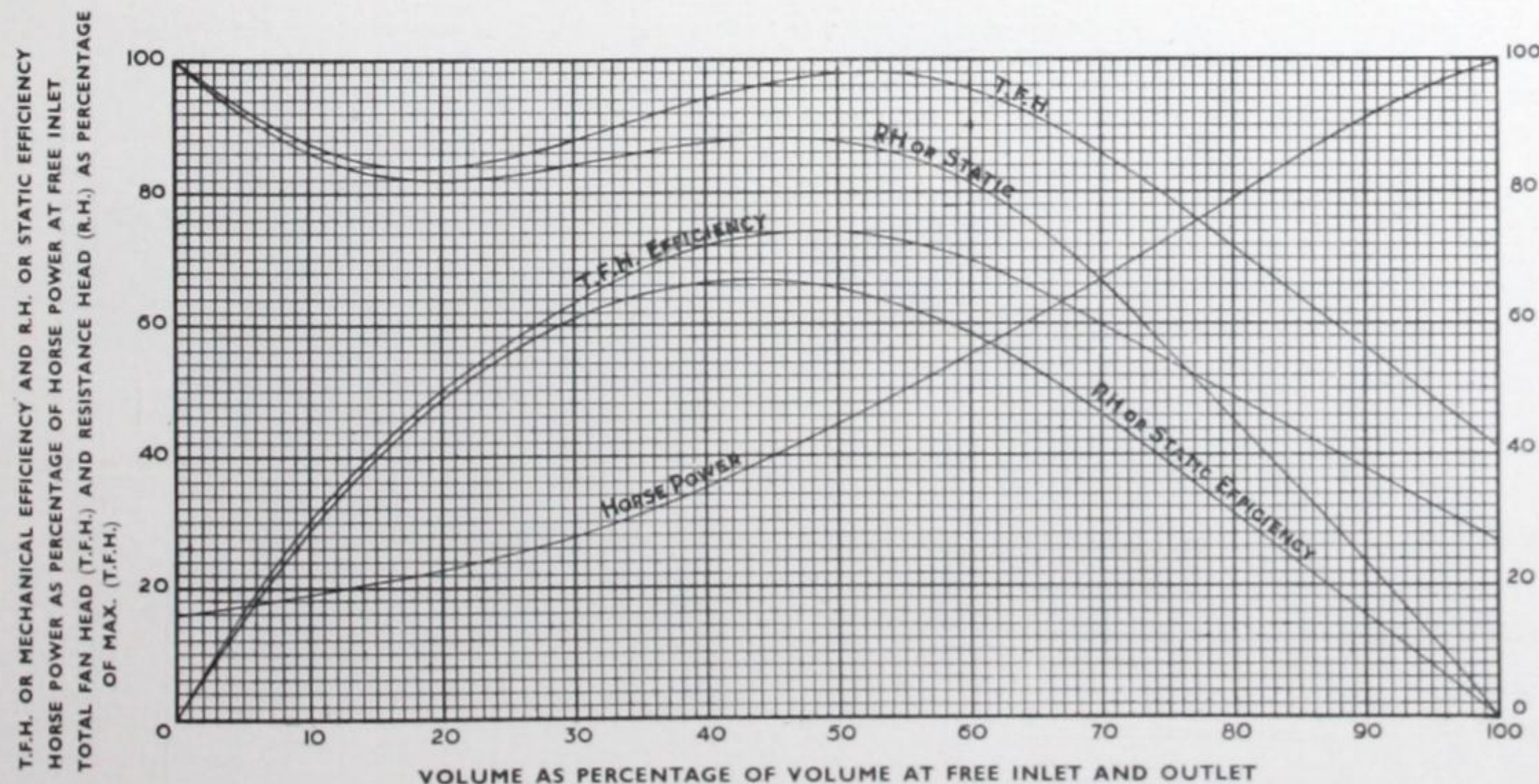
SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
150	3210	.643													156	87.0	162	94.3	167	100.5	173	106.5	180	114.0	190	125.0	200	137.5	
160	2915	.530												132	71.0	135	75.0	143	81.5	147	88.0	154	92.8	159	99.2	170	112.0	181	126.0
170	2580	.416							107	53.5	112	57.3	115	60.4	118	63.5	125	70.3	131	74.5	137	81.3	143	87.5	155	100.4	167	114.6	
180	2300	.330						90	42.7	94	46.0	98	49.6	102	52.0	105	56.0	112	61.6	118	69.6	125	76.8	131	84.0	144	98.4	157	114.0

176,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
160	3200	.640											139	88.4	142	91.6	149	99.2	153	106.0	160	113.2	165	120.0	174	132.0	185	147.2
170	2830	.500											121	75.3	125	77.5	131	85.6	136	91.0	142	99.0	148	105.5	159	119.5	170	133.0
180	2525	.400							100	57.6	103	60.8	107	64.8	110	68.4	116	76.0	122	84.0	128	88.8	134	96.0	145	110.0	154	126.0

## CHARACTERISTIC CURVES DERIVED FROM TESTS OF S.S. MULTIVANE FAN RUNNING AT CONSTANT SPEED



For dimension sheets see pages 76 to 90.

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



**SPECIAL SERIES SMALL S.S. MULTIVANE FANS**

**S**PECIAL attention is called to this group of small Fans. They are similar in characteristics to the "S.S." Type Ventilating Fan. Designed for quiet operation, they have low peripheral speeds and outlet velocities. These Fans are ideal for:—

- All small Ventilating projects.
- The supply of fresh air.
- Forced Draught in connection with small Heating Plant.
- The removal of fumes from process work, chemical laboratories, etc.

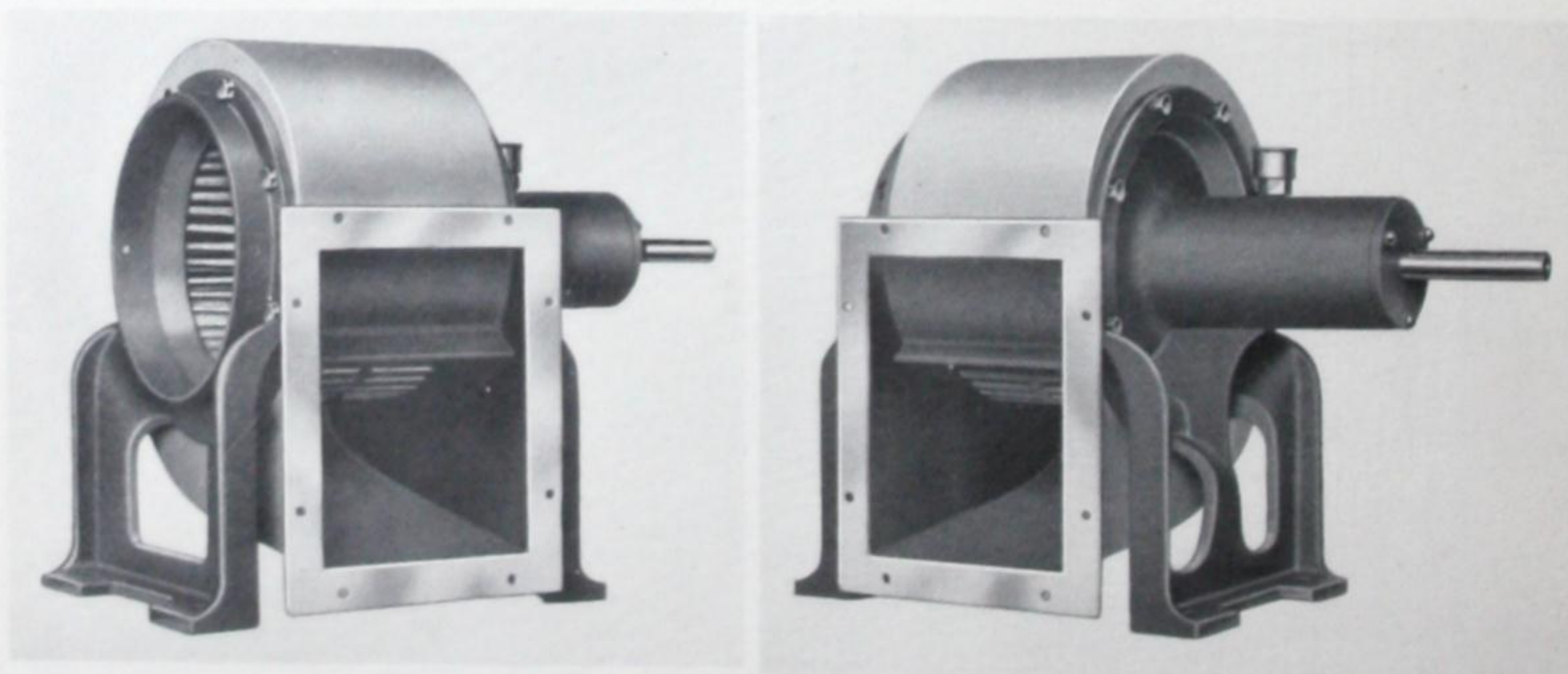
The Fans are suitable for any arrangement of drive; the standard is fitted with a bracket adaptable for either ball bearings or a double sleeve bush bearing—where not specified the double sleeve bush bearing will be supplied. A Motor bracket is substituted when direct motor-driven sets are necessary.

The scroll casing is carried on cast iron side frames and can be assembled to discharge in any direction either right or left hand.

In the preparation of these Fans the following uses have had primary consideration:—

- Ventilation and supply of fresh air to  
Flats, Offices, Staterooms,  
Telephone Booths, Vaults, Toilets and the like.
- Small Cooling and Drying Installations.
- Forced Draught for Automatic Stokers.

They are excellently suited for the collection of light dust and can, in fact, be used most successfully wherever small volumes of air or gas fumes are to be handled at comparatively low pressures.



**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**

CFM	Outlet Velocity ft. per min.
150	700
200	935
250	1168
300	1400
350	1634
400	1870
450	2100
500	2335
550	2570
600	2800
650	3040

CFM	Outlet Velocity ft. per min.
200	598
250	748
300	899
350	1047
400	1195
500	1495
600	1795
700	2092
800	2392
900	2692
1000	2992



**S·S**  
**FANS**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH

CFM	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
200	598	.022	708	.01	889	.02																						
250	748	.035	724	.01	867	.02																						
300	899	.050	762	.02	882	.03	999	.04	1122	.05																		
350	1047	.068	817	.03	920	.04	1022	.05	1120	.06	1225	.07																
400	1195	.089	881	.04	969	.05	1060	.06	1145	.07	1240	.08	1321	.09	1417	.11												
500	1495	.139	1010	.06	1090	.07	1164	.08	1231	.10	1310	.11	1375	.13	1448	.14	1588	.17										
600	1795	.200	1141	.09	1220	.11	1282	.12	1351	.13	1411	.15	1468	.17	1525	.18	1642	.21	1764	.25	1877	.29	1998	.34	2244	.43		
700	2092	.273	1279	.13	1358	.15	1419	.17	1481	.19	1540	.21	1592	.22	1634	.24	1732	.27	1840	.32	1939	.35	2044	.39	2240	.49	2450	.61
800	2392	.356	1432	.19	1490	.21	1555	.23	1601	.26	1662	.28	1712	.29	1762	.31	1850	.35	1938	.39	2021	.43	2120	.48	2290	.57	2480	.67
900	2692	.451			1638	.28	1681	.30	1749	.33	1799	.35	1845	.38	1897	.41	1978	.45	2056	.49	2133	.53	2210	.58	2371	.68	2522	.77
1000	2992	.557					1848	.40	1878	.42	1910	.45	1972	.48	2020	.51	2104	.55	2180	.60	2260	.65	2328	.70	2462	.79	2620	.92

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**S·S  
FANS**

**CYCLONE**

**S.S. FANS. Special Series for Small Volumes**

**PERFORMANCE TABLES**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**No. 15 S.S. FAN**

SINGLE INLET  
SINGLE WIDTH

CFM	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		6" RH		7" RH		8" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
400	832	-043	619	-03	735	-04	834	-05	945	-07																
500	1036	-067	680	-04	764	-05	850	-06	932	-08	1021	-11														
600	1242	-097	753	-06	824	-07	894	-09	964	-10	1037	-13	1107	-14	1178	-16										
700	1450	-131	826	-08	896	-10	955	-11	1016	-13	1077	-15	1137	-17	1199	-19	1325	-25								
800	1664	-172	904	-11	970	-13	1027	-15	1069	-17	1130	-19	1182	-22	1238	-24	1348	-28	1451	-33	1560	-40				
900	1865	-217	985	-14	1044	-17	1100	-21	1155	-22	1200	-24	1245	-26	1292	-29	1387	-33	1481	-38	1580	-44	1671	-50	1864	-67
1000	2072	-268	1067	-19	1121	-21	1178	-25	1229	-27	1275	-29	1314	-32	1360	-34	1442	-39	1529	-46	1611	-51	1699	-56	1870	-70
1100	2284	-326	1150	-24	1200	-27	1251	-30	1300	-33	1349	-36	1390	-39	1431	-41	1507	-46	1580	-51	1660	-59	1739	-65	1895	-79
1200	2484	-374	1236	-31	1282	-33	1331	-36	1379	-40	1421	-44	1462	-46	1506	-50	1572	-54	1648	-59	1718	-67	1788	-73	1928	-87
1300	2700	-455	1322	-37	1369	-41	1410	-44	1458	-47	1500	-52	1538	-55	1580	-59	1651	-65	1719	-70	1781	-76	1848	-85	1976	-98
1400	2900	-525	1409	-46	1454	-49	1490	-53	1531	-56	1575	-60	1615	-64	1652	-69	1725	-75	1791	-82	1855	-89	1910	-96	2032	-110
1500	3120	-608			1540	-59	1577	-63	1613	-67	1652	-70	1690	-74	1730	-80	1799	-89	1862	-95	1925	-101	1995	-106	2092	-124
1600	3328	-68					1662	-74	1699	-79	1731	-83	1770	-87	1808	-91	1875	-101	1939	-109	2000	-116	2054	-121	2138	-138

**No. 17 1/2 S.S. FAN**

CFM	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		6" RH		7" RH		8" RH			
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
600	912		549	-04	632	-06	715	-08	800	-10																		
700	1068	-071	591	-06	661	-07	732	-09	804	-12	872	-15																
800	1220	-092	637	-08	697	-10	759	-12	822	-14	884	-16	946	-19	1010	-22												
900	1372	-117	684	-10	743	-12	799	-15	852	-17	906	-19	964	-22	1018	-24	1128	-32										
1000	1522	-144	730	-12	792	-15	832	-18	887	-20	927	-23	985	-25	1038	-28	1134	-34	1237	-42								
1100	1676	-174	779	-15	831	-18	879	-22	932	-24	971	-26	1020	-30	1065	-33	1154	-38	1248	-45	1331	-52						
1200	1830	-208	831	-19	884	-22	934	-26	978	-28	1018	-31	1058	-34	1098	-37	1180	-43	1264	-51	1348	-57	1430	-67	1600	-89		
1300	1980	-244	870	-23	932	-27	980	-31	1024	-33	1060	-37	1100	-40	1138	-43	1214	-51	1289	-57	1367	-64	1441	-73	1595	-94		
1400	2135	-284	935	-28	971	-31	1029	-37	1070	-39	1111	-42	1146	-46	1182	-49	1246	-57	1322	-63	1391	-72	1464	-81	1608	-98	1744	-120
1500	2282	-325	985	-33	1029	-37	1078	-42	1119	-45	1158	-50	1194	-53	1229	-56	1282	-63	1358	-72	1420	-78	1488	-86	1622	-107	1751	-128
1600	2440	-371	1041	-39	1082	-43	1125	-48	1167	-52	1202	-57	1241	-60	1274	-65	1322	-73	1394	-79	1459	-90	1518	-96	1644	-113	1768	-134
1700	2590	-417	1098	-46	1140	-51	1172	-56	1212	-59	1249	-65	1287	-70	1322	-74	1382	-79	1441	-90	1499	-96	1540	-107	1669	-123	1790	-141
1800	2742	-468	1148	-53	1191	-58	1222	-66	1268	-67	1301	-73	1339	-80	1368	-84	1421	-91	1486	-99	1540	-108	1598	-115	1704	-134	1812	-156
2000	3050	-579			1241	-77	1332	-80	1361	-85	1398	-91	1430	-97	1460	-102	1521	-115	1584	-125	1625	-133	1664	-141	1774	-161	1854	-187
2200	3355	-699					1439	-109	1471	-111	1511	-116	1532	-121	1559	-125	1618	-142	1662	-152	1726	-162	1758	-172	1864	-193	1942	-212

For dimension sheet see page 88.

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**

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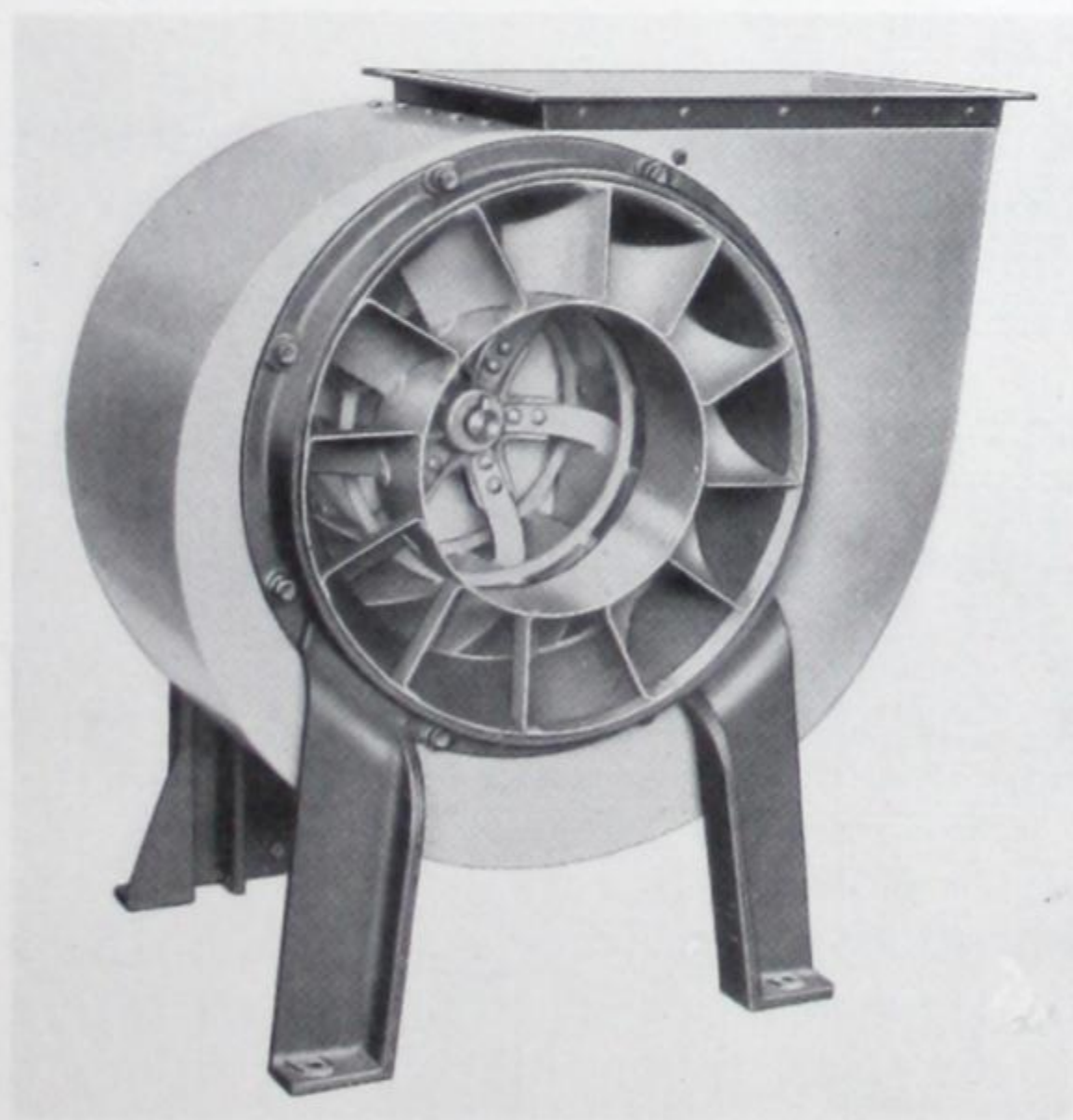


**CYCLONE**

**H·S**  
FANS

# H·S

IGH PEED  
CURVED BACK  
FANS



H.S.C.B. Fan, 20 to 60 Construction. Inlet Side.  
Type R.3. Complete with Guide Vanes.  
Arrangement No. 2.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**CYCLONE**

**H.S. CURVED BACK FANS**  
for  
**VENTILATION AND FORCED DRAUGHT**

**D**URING the last few years this high speed full backward curve type Fan has received much attention from fan users, not the least reason being because it effects genuine economies in both first and operating costs. Less expensive Motors can be used and there is high efficiency over a wide performance range.

The outstanding characteristics of the full backward curve type fan is the steep pressure curve, the non-overloading power curve, and the high speed. This Fan operates at a peripheral speed of approximately double that of the forward curve Multivane type for like results. In spite of the relatively high speed, these Fans are quiet in operation.

The resistance head curve rises continuously from a wide open to a shut off condition, and is relatively steep, permitting only a small change in volume with liberal variations in the static pressure; and where wide fluctuations occur, this type of fan is desirable and prevents overloading of the Motors.

See Characteristic Curve, page 38.

This type of Fan with its high speed is especially adaptable for direct coupled Motor drive.

**Fixed vanes are fitted in the inlet evase of this Fan, their inner diameter being a little less than the internal diameter of the impeller blades. The vanes are arranged to give an air flow in the direction of impeller rotation, before the air reaches that part of the revolving blades that projects down into the inlet.**

**The fixed vanes add to both efficiency and quiet running. They are completely housed in the evase cone, and do not in any way interfere with the inlet connections and ducting, or the placing of a bearing in the inlet when such becomes necessary.**

Sturdy and dependable in construction, it is made in a range of sizes to cover every requirement encountered in air conditioning, and forced and induced draught.

Sizes 20 to 60 inclusive are built with a steel scroll, welded to steel side plates into which are fitted heavy cast iron side frames containing the inlet cone and bearing stool, ensuring perfectly rigid support to the impeller, shaft and bearings. The side frames allow the Fan to be fixed in any of eight directions of air discharge, either clockwise or counter-clockwise.

The openings in the Fan housing receiving the side frames are larger in diameter than the impeller and allow it to be easily removed from the housing for cleaning and inspection.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



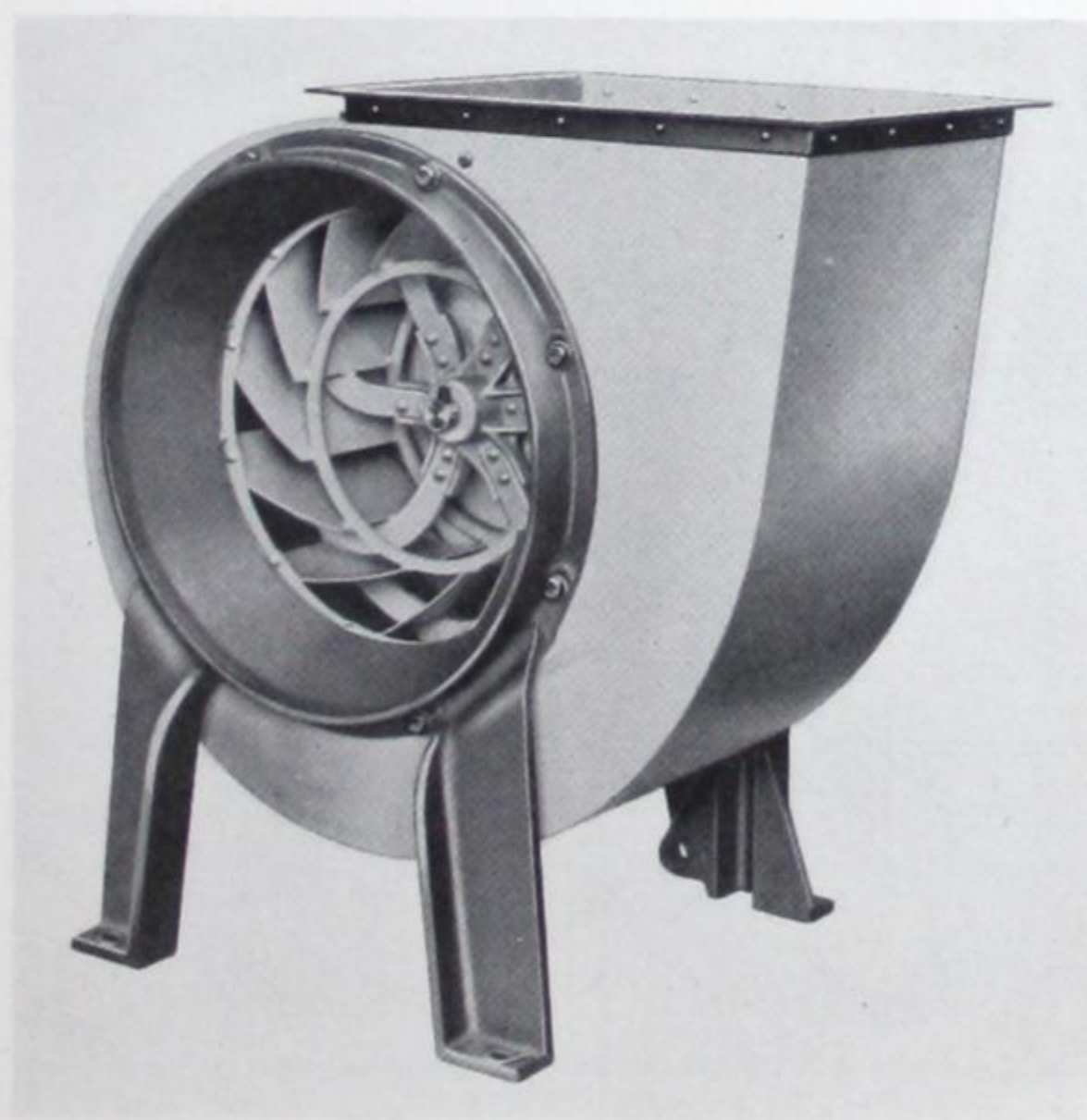
## **CYCLONE**

**H·S**  
**FANS**

In the larger sizes 70 and upwards, the Fans are built to meet the requirements of the installation and the Fan housings are constructed entirely in heavy steel plate, rigidly braced by steel sections. The built-up structure supporting the bearings is given special consideration, and the vertical supports are taken down to the floor line.

All plates and sections of the Fan housings are rivetted and bolted together and the Fan housing can be so constructed that it may be easily taken apart to gain entrance to comparatively small openings. The Fan impeller cannot be dismantled for obvious reasons.

Where silence is essential, our patented **laminated casings** have proved very effective in stopping "drumming." In fact, in most instances where these particular casings have been adopted and the fans run at a reasonable speed, they could not be heard at all.



H.S. Curved Back Fan, 20 to 60 Construction. Inlet Side,  
with Guide Vanes removed. Type R.3.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



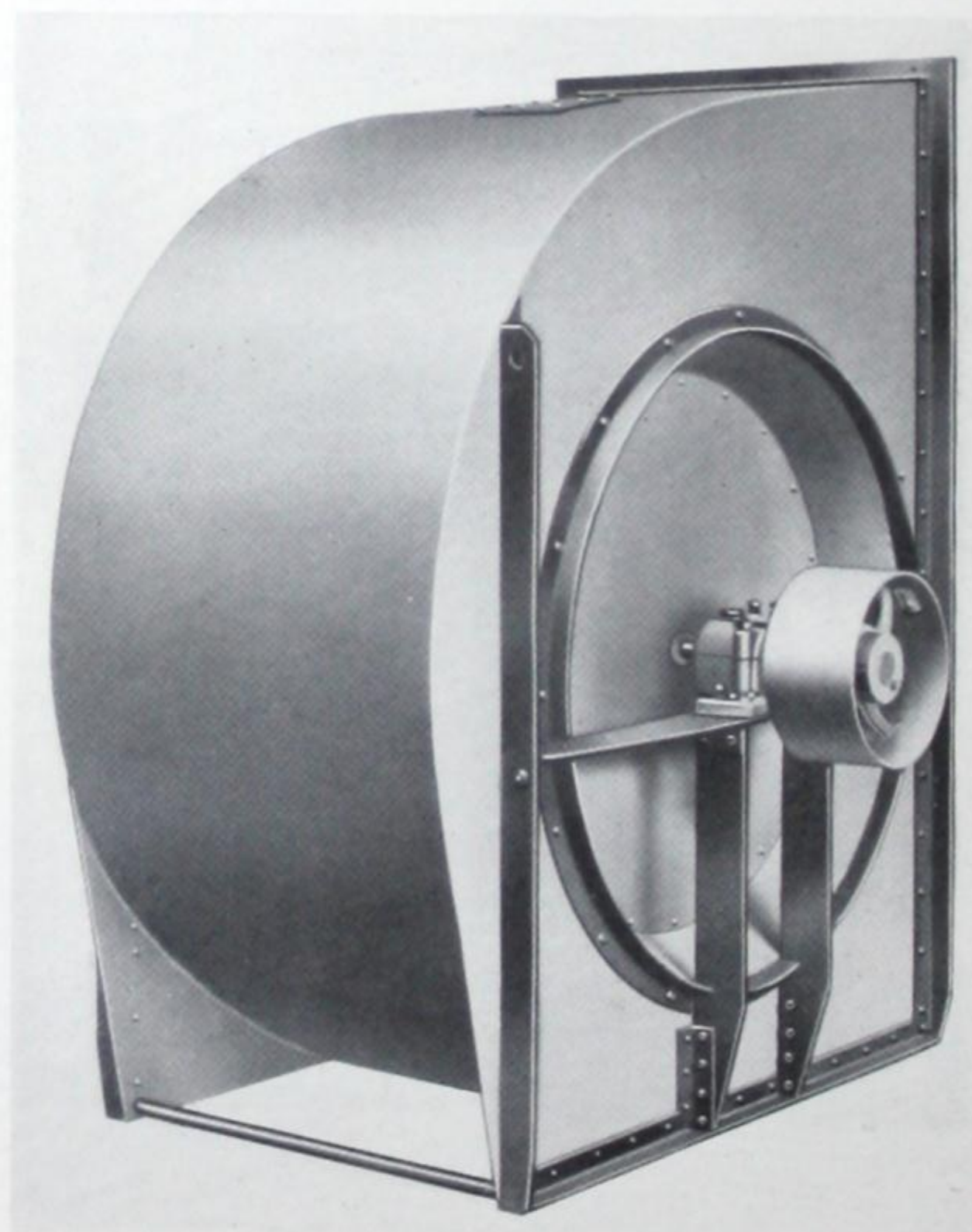
## **CYCLONE**

The impeller is fitted according to Fan size with twelve or sixteen deep backward curved blades, the double-width double-inlet Fans each have two impellers of similar construction.

The Blades of the impeller are rivetted to substantial side rims. To obtain maximum rigidity and strength a central rim extends around and is let into the periphery of the blades to which it is electrically welded.

To the impeller hub, which is a steel alloy casting, is securely fixed six or eight mild steel rectangular section arms, the outer ends of which are rivetted to the central rim. Two intermediate rings extend around and are welded to the inside edges of the blades, making the whole into a single structure of great strength and lightness.

The impeller is carefully and accurately balanced.



H.S.C.B. Fan with Babbitted Ring Oiling, self-aligning Bearings, Standard equipment. Construction of sizes 70 and upwards. Pulley Side.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



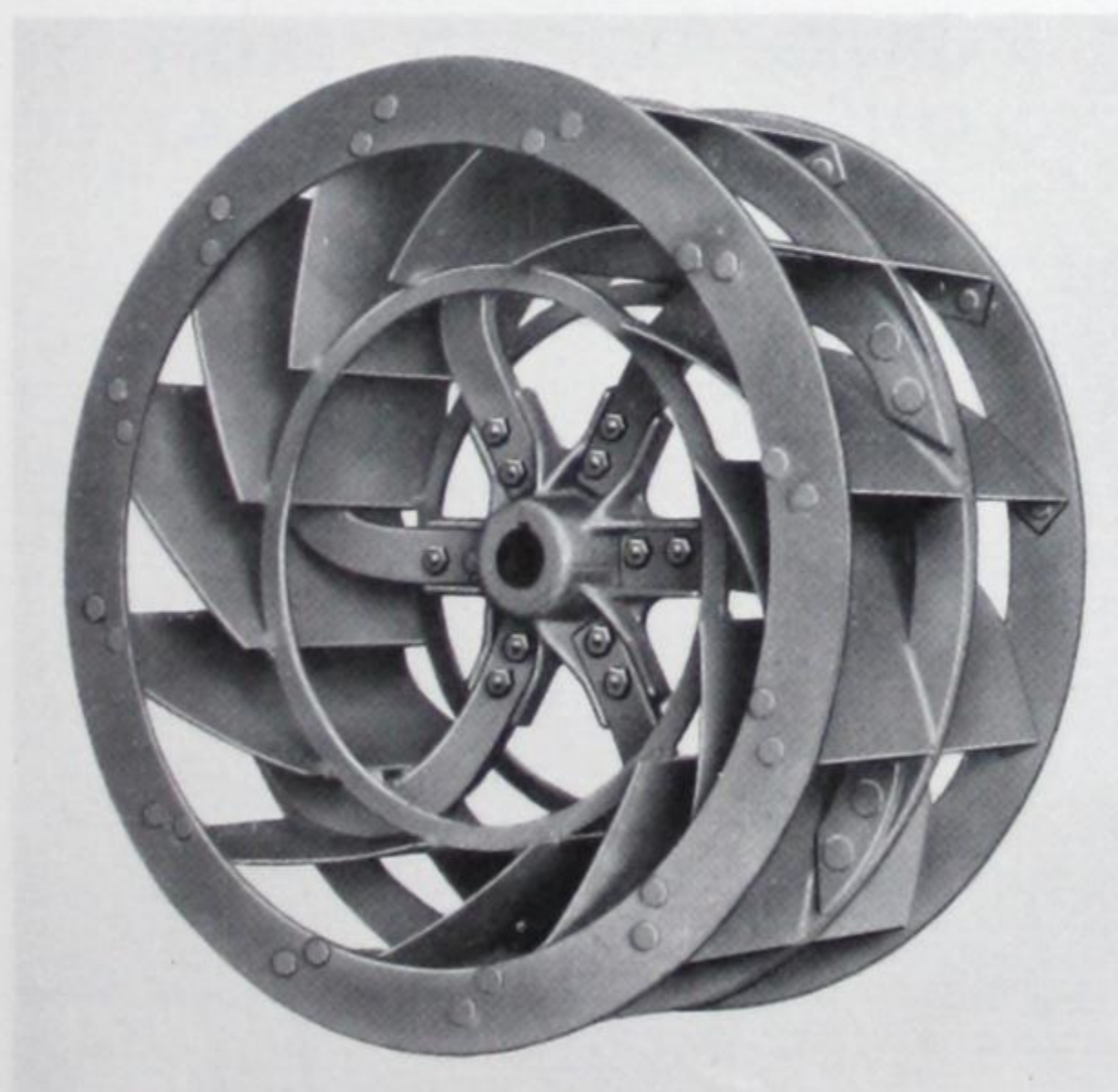
## **CYCLONE**

As this Fan is essentially a high-speed Fan, to obtain good results the high peripheral speed must be given the greatest consideration in the impeller design.

For this reason and to avoid the tendency to deformation, the impeller is driven through its centre of gravity, eliminating many of the stresses and running out of balance conditions that arise through and are incident to a backplate drive.

Bracing rods are not used or necessary in the H.S.C.B. impeller design. This is a notable feature. Bracing rods which excellently serve a purpose at lower speeds, are likely to vibrate and ultimately fracture at high speeds.

For the smaller Fan sizes, when the impeller is not directly keyed on the motorshaft, double row self-aligning ball bearings are usually fitted, but when silent ventilating work is the duty of the Fan, the Cyclone standard babbitted inner sleeve ring oiling bearing is best suited.



H.S.C.B. Impeller, 20 to 60 Construction.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## **CYCLONE**

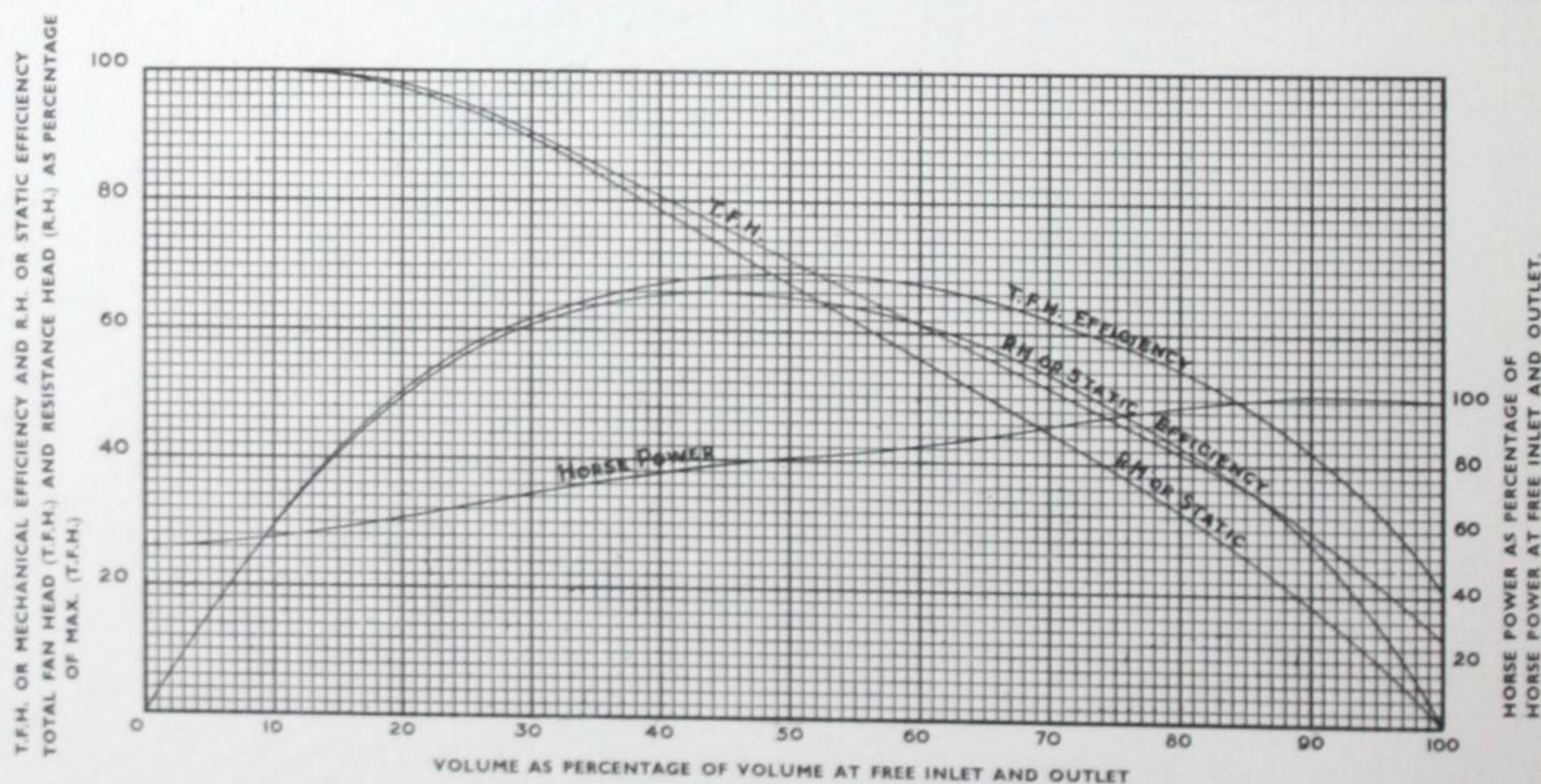
For Fans sizes 70 and upwards the Cyclone Standard babbitted inner sleeve ring oiling bearing is standard equipment. A Universal movement allows the inner sleeve to take up any position required in the shaft alignment, and the outer casing is designed to rest on four setscrews for easy height adjustment. The bearing is therefore self-aligning in all planes. A full description of this bearing is given in connection with S.S. Type Fans, page 10.

### **FAN SHAFT**

The fan shaft is made from best quality steel bar accurately ground to size. Each shaft is properly proportioned to prevent whipping, and is of such a diameter that the first critical speed is not approached with the impeller running at maximum recommended speed.

It is generally allowed that the high speed curved back bladed fan calls for more attention and service than is usually required for the slower curved forward Multivane Fan and that its dimensional bulk for a given duty is considerably greater. The Cyclone H.S.C.B. Fan is designed to eliminate this difference. No extra attention need be given and no extra space is necessary for its installation.

### **CHARACTERISTIC CURVES DERIVED FROM TESTS UPON A No. 30 H.S.C.B. CYCLONE FAN RUNNING AT CONSTANT SPEED**



**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**CYCLONE****HIGH SPEED CURVED BACK FAN****PERFORMANCE TABLES****Pages 40 to 75.**

**T**O enable the fan user quickly and accurately to find the fan he wishes to use, the performance tables are arranged in such a way that the several sizes of fans that will satisfactorily perform a given duty are grouped together under a specified air volume and it will be seen that the range covers practically any installation.

Generally the important factors in selecting fans for ventilating systems are efficiency and noise. First cost and space available are usually secondary.

If an efficient and quiet fan is the chief consideration, select the fan size that meets the requirement when operating at the highest point of efficiency.

If space or cost has to be considered it may become necessary to select a smaller fan, usually with a slightly lower efficiency.

The performance tables are based on the actual air delivered at the resistance head shown, and are computed from tests conducted strictly in accordance with the Test Code as set out by the "Fan Standardisation Committee".

The total fan head is readily obtained by adding to the resistance head the velocity head or pressure corresponding to the outlet velocity given in the third column.

For notes on "How to Select a Cyclone Fan," see pages 93 to 96.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# H.S. FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

1,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1162	·071	1091	·102	1185	·124	1262	·151	1349	·178	1413	·200	1481	·226	1546	·250	1661	·302	1762	·356	1865	·415		
25	746	·047	684	·07	769	·097	844	·125	910	·146	970	·174	1040	·202	1079	·23	1176	·306	1262	·354	1348	·43		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1162	·071	1960	·475	2122	·59	2280	·71	2425	·83	2560	·97	2680	1·11	2810	1·24	2922	1·39	3031	1·54	3150	1·68
25	746	·047	1422	·504	1561	·63	1689	·80	1811	·95	1925	1·13	2032	1·29	2136	1·48	2236	1·66	2325	1·86	2418	2·05

1,250 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1452	·132	1271	·17	1360	·196	1425	·227	1500	·254	1564	·29	1628	·32	1692	·35	1801	·405	1905	·47	2000	·54		
25	932	·054	766	·104	849	·132	919	·167	985	·195	1041	·22	1095	·258	1147	·29	1240	·37	1326	·44	1409	·52		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1452	·132	2089	·61	2250	·74	2410	·88	2548	1·02	2680	1·18	2807	1·33	2925	1·50	3040	1·66	3147	1·82	3260	1·98
25	932	·054	1482	·60	1616	·76	1747	·93	1864	1·10	1972	1·30										

1,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1742	·190	1481	·266	1550	·30	1605	·33	1669	·37	1729	·405	1789	·44	1848	·47	1950	·54	2032	·61	2141	·69		
25	1120	·078	919	·146	925	·180	995	·216	1055	·258	1112	·285	1164	·33	1217	·36	1309	·45	1392	·53	1471	·61		
30	775	·038	582	·11	652	·15	716	·19	768	·22	817	·26	862	·30	908	·35	989	·45	1060	·53				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	1742	·190	2228	·78	2389	·96	2542	1·09	2680	1·25	2810	1·43	2934	1·60	3043	1·79	3161	1·97	3270	2·14	3378	2·31
25	1120	·078	1547	·71	1679	·88	1803	1·07	1920	1·25	2028	1·46										

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## H.S. CURVED BACK FANS

## PERFORMANCE TABLES

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

1,750 C.F.M.

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2032	·257			1757	·43	1802	·47	1859	·51	1910	·56	1967	·60	2020	·64	2115	·71	2210	·80	2302	·89		
25	1302	·106	938	·21	1017	·24	1072	·28	1138	·33	1190	·38	1246	·42	1306	·46	1385	·55	1467	·64	1545	·74		
30	904	·051	630	·14	698	·18	757	·23	810	·27	858	·31	904	·36	946	·41	1028	·51	1099	·61	1167	·72		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2032	·257	2381	·97	2540	1·16	2695	1·34	2820	1·53	2958	1·71	3072	1·90	3190	2·12	3300	2·32	3410	2·52	3518	2·70
25	1302	·106	1614	·84	1747	1·02	1872	1·23	1988	1·44	2092	1·66	2190	1·90	2286	2·14						
30	904	·051	1229	·85																		

2,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2325	·337					2000	·64	2041	·69	2090	·74	2139	·78	2187	·83	2277	·92	2371	1·01	2458	1·11		
25	1490	·139	1036	·28	1105	·33	1160	·38	1219	·42	1270	·47	1320	·52	1369	·56	1459	·66	1538	·76	1615	·87		
30	1035	·067	678	·18	742	·23	801	·27	852	·33	900	·37	948	·43	989	·48	1068	·60	1138	·70	1204	·82		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2325	·337	2535	1·21	2690	1·41	2840	1·61	2960	1·81	3090	2·03	3210	2·24	3322	2·47	3430	2·69	3533	2·91	3640	3·11
25	1490	·139	1685	·98	1813	1·19	1940	1·42	2052	1·63	2160	1·89	2256	2·14	2353	2·40	2446	2·64	2529	2·90	2624	3·14
30	1035	·067	1266	·95	1377	1·19	1482	1·45	1580	1·70												

2,250 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2614	·427					2242	·92	2288	·97	2310	1·02	2370	1·08	2452	1·18	2541	1·28	2625	1·38				
25	1676	·176	1162	·37	1210	·43	1255	·48	1308	·53	1356	·59	1407	·65	1452	·70	1535	·80	1618	·91	1690	1·03		
30	1165	·085	728	·23	791	·28	844	·34	899	·40	943	·45	989	·51	1030	·56	1109	·69	1177	·80	1242	·92		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2614	·427	2699	1·50	2844	1·71	2990	1·93	3110	2·17	3232	2·37	3354	2·64	3465	2·89	3570	3·12	3674	3·36	3780	3·58
25	1676	·176	1758	1·15	1888	1·38	2012	1·63	2121	1·88	2228	2·15	2322	2·40	2420	2·69	2510	2·96	2600	3·23	2690	3·48
30	1165	·085	1306	1·07	1413	1·32	1520	1·60	1615	1·87	1706	2·19										

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# H·S FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM  
BAROMETRIC PRESSURE 30" Hg.

2,500 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2920	·534															2522	1·30	2558	1·35	2630	1·45	2714	1·56	2787	1·68
25	1860	·216							1310	·54	1347	·60	1392	·65	1440	·72	1489	·78	1530	·83	1615	·94	1692	1·07	1765	1·19
30	1286	·103	780	·30					843	·35	891	·41	942	·47	990	·54	1032	·60	1075	·65	1151	·78	1219	·91	1283	1·05
35	950	·056	552	·20	612	·27	662	·34	708	·39	748	·46	788	·52	824	·58	892	·75	954	·87	1011	·02				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	2920	·534	2860	1·81	3005	2·04	3138	2·29	3258	2·52	3380	2·80	3500	3·05	3606	3·33	3708	3·58	3816	3·85	3918	4·08
25	1860	·216	1832	1·33	1962	1·58	2082	1·84	2190	2·11	2298	2·40	2390	2·67	2484	2·99	2578	3·28	2660	3·57	2750	3·85
30	1286	·103	1343	1·20	1450	1·47	1558	1·76	1652	2·06	1742	2·38	1824	2·73								
35	950	·056	1065	1·19	1160	1·49	1251	1·83	1335	2·17	1411	2·57										

2,750 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	3200	·640															2740	1·64	2762	1·70	2824	1·82	2900	1·94	2972	2·06
25	2050	·263							1402	·68	1442	·73	1484	·80	1530	·87	1573	·94	1612	1·00	1691	1·11	1770	1·25	1840	1·39
30	1420	·126	835	·36					894	·42	940	·49	990	·55	1033	·62	1078	·70	1119	·76	1193	·90	1260	1·03	1323	1·18
35	1045	·068	585	·26	642	·32	689	·38	736	·46	775	·50	815	·59	851	·65	916	·81	977	·95	1037	1·13				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20	3200	·640	3040	2·21	3180	2·47	3310	2·75	3422	3·01	3540	3·29	3660	3·58	3764	3·86	3864	4·14	3964	4·42	4070	4·69
25	2050	·263	1905	1·53	2032	1·81	2155	2·10	2258	2·40	2362	2·67	2460	2·98	2551	3·31	2640	3·61	2722	3·91	2810	4·21
30	1420	·126	1382	1·34	1490	1·62	1596	1·95	1691	2·25	1780	2·60	1860	2·95	1941	3·30	2019	3·67	2090	4·04	2167	4·37
35	1045	·068	1090	1·30	1184	1·63	1275	1·97	1358	2·34	1436	2·74	1510	3·15	1578	3·51						

3,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2230	·310															1669	1·13	1709	1·19	1780	1·32	1857	1·46	1927	1·61
30	1550	·150	895	·45					951	·51	992	·59	1040	·65	1081	·73	1125	·80	1162	·86	1238	1·01	1303	1·16	1366	1·32
35	1140	·081	616	·30	671	·36	716	·43	763	·51	802	·58	840	·66	878	·73	945	·90	1005	1·06	1060	1·22				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2230	·310	1988	1·77	2112	2·06	2232	2·37	2335	2·68	2440	3·01	2536	3·34	2624	3·68	2700	4·01	2794	4·35	2880	4·66
30	1550	·150	1425	1·50	1532	1·80	1637	2·14	1730	2·46	1819	2·83	1899	3·20	1978	3·58	2055	3·96	2127	4·34	2203	4·69
35	1140	·081	1115	1·43	1207	1·77	1298	2·12	1380	2·50	1458	2·92	1529	3·33	1599	3·74						

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

3,250 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2415	·365							1683	1·18	1720	1·26	1756	1·33	1792	1·40	1862	1·56	1940	1·71
30	1680	·176	958	·54	1008	·62	1046	·69	1090	·76	1130	·85	1171	·92	1210	1·00	1281	1·15	1348	1·31
35	1235	·095	648	·35	704	·43	746	·52	791	·60	832	·68	869	·76	906	·84	972	1·02	1032	1·17
40	945	·056	483	·26	534	·35	578	·44	616	·53	654	·61	688	·68	720	·76	780	·98	833	1·14

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/8" RH		3 1/4" RH		3 1/2" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2415	·365	2068	2·03	2190	2·36	2309	2·67	2408	3·00	2511	3·37	2606	3·69	2696	4·06	2776	4·41	2862	4·77
30	1680	·176	1466	1·66	1572	1·98	1678	2·35	1770	2·70	1859	3·09	1938	3·46	2017	3·88	2092	4·26	2162	4·65
35	1235	·095	1140	1·55	1232	1·91	1323	2·31	1406	2·70	1480	3·13								
40	945	·056	931	1·56	1016	1·95														

3,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2607	·425											1825	1·50	1860	1·58	1890	1·66	1960	1·82
30	1810	·205	1023	·66	1065	·74	1100	·82	1141	·89	1180	·97	1220	1·06	1256	1·14	1325	1·30	1391	1·47
35	1330	·111	681	·42	736	·50	776	·58	821	·68	861	·76	897	·86	933	·92	997	1·10	1055	1·29
40	1018	·065	503	·30	555	·39	596	·48	636	·57	672	·64	707	·74	737	·83	797	1·04	850	1·22

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/8" RH		3 1/4" RH		3 1/2" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2607	·425	2155	2·32	2274	2·66	2382	3·00	2482	3·37	2584	3·75	2680	4·10	2774	4·49	2855	4·85	2940	5·23
30	1810	·205	1510	1·85	1617	2·20	1719	2·57	1809	2·95	1895	3·35	1976	3·73	2054	4·19	2130	4·59	2200	5·00
35	1330	·111	1162	1·69	1255	2·07	1348	2·48	1428	2·88	1502	3·32	1572	3·81						
40	1018	·065	946	1·67	1030	2·08	1109	2·52												

3,750 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2780	·482											1958	1·85	1986	1·94	2042	2·10	2114	2·26
30	1940	·235			1122	·86	1157	·95	1193	1·03	1230	1·12	1270	1·21	1304	1·30	1372	1·45	1438	1·65
35	1427	·127	718	·50	770	·58	807	·68	849	·76	888	·86	925	·95	960	1·03	1025	1·22	1082	1·41
40	1090	·074	525	·36	572	·44	615	·53	654	·64	690	·73	722	·82	756	·91	814	1·14	867	1·31

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/8" RH		3 1/4" RH		3 1/2" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2780	·482	2234	2·62	2351	2·98	2462	3·36	2560	3·73	2659	4·13	2754	4·51	2843	4·92	2922	5·31	3010	5·70
30	1940	·235	1552	2·05	1660	2·42	1760	2·80	1850	3·20	1938	3·63	2016	4·03	2093	4·51	2169	4·93	2240	5·37
35	1427	·127	1188	1·84	1280	2·23	1370	2·65	1454	3·07	1529	3·55	1596	4·03	1667	4·51				
40	1090	·074	963	1·78	1045	2·22	1125	2·68												

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# H·S FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

4,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2977	·522													2030	2·16	2086	2·25	2139	2·41	2204	2·58
30	2070	·268			1182	1·01	1215	1·09	1249	1·18	1283	1·28	1321	1·37	1355	1·47	1420	1·64	1483	1·84	1542	2·04
35	1522	·145	755	·58	806	·67	841	·76	884	·86	918	·96	957	1·06	990	1·15	1055	1·33	1110	1·55	1164	1·77
40	1165	·085	545	·40	592	·50	632	·60	674	·71	706	·80	740	·90	778	·99	831	1·21	881	1·42	932	1·65
45	920	·053	424	·31	469	·40	508	·51	544	·61	575	·72	606	·83	635	·92	688	1·19	736	1·40	783	1·64

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	2977	·522	2320	2·98	2436	3·35	2542	3·76	2640	4·14	2735	4·56	2830	4·97	2920	5·36	2998	5·80	3079	6·21	3162	6·62
30	2070	·268	1596	2·25	1702	2·65	1803	3·07	1891	3·49	1978	3·92	2057	4·35	2134	4·85	2207	5·28	2278	5·75	2350	6·16
35	1522	·145	1216	1·98	1306	2·39	1396	2·85	1477	3·31	1550	3·81	1620	4·28	1690	4·80	1758	5·30	1818	5·82	1882	6·30
40	1165	·085	980	1·90	1061	2·36	1140	2·84	1212	3·32	1280	3·88	1340	4·44	1405	4·96						
45	920	·053	822	1·91	896	2·43	968	2·96	1032	3·52	1092	4·15										

4,250 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	3170	·630													2164	2·50	2188	2·58	2239	2·76	2295	2·96
30	2200	·302			1244	1·16	1272	1·26	1304	1·35	1339	1·46	1372	1·56	1407	1·65	1469	1·84	1532	2·05	1590	2·26
35	1618	·164	794	·66	841	·76	876	·86	915	·95	949	1·07	986	1·17	1018	1·28	1081	1·47	1137	1·69	1190	1·91
40	1232	·095	570	·49	615	·60	652	·71	692	·81	727	·92	761	1·05	793	1·14	850	1·39	904	1·61	952	1·86
45	978	·060	437	·36	482	·47	521	·58	554	·68	587	·79	618	·90	645	1·01	699	1·26	746	1·48	792	1·73

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	3170	·630	2410	3·38	2520	3·78	2628	4·20	2720	4·61	2818	5·03	2914	5·46	3000	5·92	3079	6·35	3158	6·78	3232	7·20
30	2200	·302	1641	2·48	1748	2·91	1847	3·35	1931	3·77	2020	4·24	2097	4·68	2174	5·20	2247	5·65	2318	6·15	2389	6·57
35	1618	·164	1241	2·14	1331	2·59	1420	3·05	1500	3·50	1577	4·02	1643	4·51	1711	5·06	1778	5·60	1830	6·12		
40	1232	·095	997	2·14	1078	2·60																
45	978	·060	832	2·02	907	2·60																

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

4,500 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET

SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	3350	·700													2302	2·97	2348	3·17	2397	3·39	2455	3·60				
30	2323	·338							1332	1·45	1361	1·55	1395	1·66	1426	1·76	1460	1·86	1518	2·07	1581	2·28	1639	2·50		
35	1710	·183	837	·77	877	·88	910	·98	946	1·08	980	1·21	1012	1·30	1049	1·40	1108	1·61	1165	1·83	1218	2·07				
40	1307	·106	587	·53	636	·64	671	·74	711	·87	744	·98	778	1·08	809	1·19	865	1·42	916	1·65	966	1·88				
45	1032	·066	453	·40	494	·52	534	·63	568	·74	600	·84	632	·97	658	1·08	712	1·35	758	1·57	804	1·84				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25	3350	·700	2510	3·86	2612	4·26	2715	4·69	2810	5·12	2898	5·58	2991	6·04	3082	6·51	3160	6·95	3240	7·41	3322	7·86
30	2323	·338	1689	2·73	1792	3·18	1890	3·63	1973	4·07	2060	4·57	2139	5·05	2219	5·56	2285	6·05	2364	6·55	2428	7·00
35	1710	·133	1267	2·32	1358	2·79	1449	3·26	1528	3·74	1600	4·30	1669	4·80	1738	5·37	1804	5·92	1862	6·46	1929	6·95
40	1307	·106	1010	2·15	1092	2·63	1171	3·16	1242	3·68	1309	4·26										
45	1032	·066	844	2·14																		

4,750 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2450	·375							1396	1·65	1420	1·76	1451	1·87	1481	1·98	1510	2·09	1570	2·31	1632	2·53	1688	2·75		
35	1805	·204	878	·88	914	·99	943	1·10	979	1·21	1011	1·33	1046	1·44	1077	1·56	1137	1·77	1194	2·00	1245	2·24				
40	1380	·119	615	·60	660	·71	695	·82	732	·94	765	1·06	799	1·17	828	1·30	885	1·53	936	1·77	984	2·04				
45	1093	·075	466	·45	511	·56	547	·67	573	·81	613	·92	644	1·03	670	1·17	724	1·44	771	1·67	815	1·93				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2450	·375	1737	2·98	1839	3·46	1936	3·94	2019	4·41	2102	4·95	2180	5·42	2258	5·96	2327	6·46	2397	6·98	2468	7·43
35	1805	·204	1293	2·52	1384	2·99	1472	3·48	1550	4·02	1624	4·56	1692	5·08	1759	5·70	1825	6·25	1885	6·80	1949	7·32
40	1380	·119	1029	2·31	1110	2·81	1189	3·34	1260	3·88	1326	4·50	1389	5·10								
45	1093	·075	855	2·25	928	2·81	1000	3·40														

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

5,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2590	·420									1480	1·98	1508	2·12	1537	2·22	1564	2·33	1620	2·57	1682	2·79
35	1900	·226			949	1·12	977	1·22	1010	1·32	1043	1·45	1078	1·58	1108	1·70	1168	1·90	1221	2·14	1270	2·40
40	1455	·131	635	·68	680	·78	712	·88	750	1·01	782	1·16	814	1·28	846	1·40	900	1·62	952	1·88	1000	2·16
45	1150	·082	480	·52	524	·61	560	·74	596	·85	626	·99	655	1·12	684	1·24	736	1·50	782	1·77	825	2·04
50	931	·054	383	·41	424	·52	459	·66	492	·78	520	·88	547	1·03	573	1·16	620	1·48	663	1·76	704	2·08

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH		4" RH		4 1/4" RH		4 1/2" RH		5" RH		5 1/4" RH		5 1/2" RH		6" RH		6 1/4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2590	·420	1783	3·27	1882	3·76	1980	4·25	2060	4·77	2145	5·32	2224	5·80	2300	6·38	2368	6·89	2438	7·43	2508	7·90										
35	1900	·226	1320	2·68	1410	3·18	1498	3·69	1575	4·24	1650	4·81	1718	5·32	1786	5·99	1848	6·52	1911	7·10	1971	7·65										
40	1455	·131	1044	2·44	1125	2·96	1205	3·52	1274	4·08	1340	4·72	1403	5·32	1462	6·00																
45	1150	·082	867	2·36	940	2·95	1010	3·53																								
50	931	·054	741	2·40																												

5,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2840	·505																				
35	2085	·271			1024	1·41	1050	1·52	1081	1·64	1110	1·79	1140	1·90	1170	2·04	1225	2·28	1280	2·56	1330	2·85
40	1600	·160	690	·85	730	·98	762	1·10	796	1·22	826	1·38	859	1·51	895	1·63	942	1·90	991	2·17	1040	2·45
45	1260	·099	512	·62	552	·76	587	·89	622	1·00	653	1·17	683	1·31	710	1·43	760	1·71	806	2·00	850	2·28
50	1028	·066	406	·50	445	·61	480	·74	512	·88	540	1·00	567	1·16	592	1·30	640	1·63	681	1·91	721	2·22

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH		4" RH		4 1/4" RH		4 1/2" RH		5" RH		5 1/4" RH		5 1/2" RH		6" RH		6 1/4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	2840	·505	1882	3·92	1980	4·43	2070	4·98	2151	5·52	2232	6·11	2312	6·67	2388	7·28	2452	7·84	2521	8·41	2590	8·94										
35	2085	·271	1375	3·13	1470	3·67	1555	4·25	1625	4·83	1700	5·41	1770	6·00	1840	6·70	1900	7·28	1960	7·93	2020	8·50										
40	1600	·160	1030	2·77	1160	3·32	1240	3·95	1310	4·55	1375	5·23	1435	5·87	1495	6·58	1555	7·27	1605	7·93												
45	1260	·099	890	2·62	961	3·22	1033	3·87	1097	4·51	1157	5·24																				
50	1028	·066	757	2·60	825	3·24																										

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**H·S**  
FANS

## H.S. CURVED BACK FANS

## PERFORMANCE TABLES

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**6,000 C.F.M.**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	3105	·603															1775	3·42	1795	3·55	1838	3·80	1888	4·06
35	2280	·325							1122	1·86	1150	1·99	1175	2·14	1206	2·28	1234	2·41	1288	2·68	1341	2·96	1390	3·26
40	1745	·190	740	1·06	775	1·20	802	1·32	834	1·48	864	1·62	894	1·76	924	1·88	975	2·16	1016	2·44	1070	2·76	1120	3·08
45	1380	·119	545	·77	586	·90	618	1·03	652	1·19	680	1·35	717	1·48	737	1·64	786	1·93	832	2·25	875	2·58	925	2·91
50	1120	·078	424	·58	462	·72	497	·86	527	1·03	556	1·14	582	1·32	608	1·44	654	1·80	696	2·12	735	2·44		
55	925	·053	348	·50	385	·64	417	·80	447	·94	472	1·07	497	1·24	520	1·41	563	1·78	602	2·11				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	3105	·603	1983	4·67	2076	5·22	2163	5·82	2242	6·40	2321	7·02	2402	7·63	2475	8·26	2540	8·86	2608	9·48	2676	10·0
35	2280	·325	1431	3·58	1521	4·16	1608	4·78	1680	5·37	1752	6·04	1820	6·66	1888	7·36	1948	8·04	2002	8·70	2066	9·30
40	1745	·190	1114	3·12	1194	3·84	1271	4·30	1340	5·00	1405	5·72	1467	6·40	1521	7·16	1580	7·88	1635	8·56	1689	9·24
45	1380	·119	914	2·92	987	3·56	1055	4·28	1120	4·95	1180	5·70	1232									
50	1120	·078	773	2·84	839	3·52	901	4·28														

**6,500 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	3370	·708																	1920	4·27	1954	4·57	1998	4·88
35	2470	·381							1220	2·45	1247	2·61	1271	2·74	1298	2·81	1350	3·21	1402	3·49	1448	3·82		
40	1890	·223	795	1·30	826	1·45	852	1·60	880	1·72	910	1·88	940	2·06	965	2·22	1015	2·49	1065	2·82	1110	3·13		
45	1492	·139	580	·92	619	1·08	650	1·23	678	1·37	708	1·55	735	1·71	765	1·84	812	2·16	855	2·52	900	2·83		
50	1212	·092	448	·69	486	·83	516	1·00	548	1·16	576	1·30	610	1·47	626	1·61	675	1·99	716	2·30	755	2·66		
55	1003	·063	353	·57	399	·73	431	·90	466	1·07	487	1·17	510	1·34	533	1·51	575	1·91	616	2·24	652	2·64		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30	3370	·708	2091	5·55	2179	6·13	2262	6·75	2340	7·37	2413	8·02	2494	8·69	2565	9·36						
35	2470	·381	1492	4·14	1578	4·79	1665	5·44	1730	6·10	1803	6·81	1873	7·48	1940	8·23	1995	8·90	2060	9·60	2120	10·2
40	1890	·223	1151	3·50	1232	4·16	1310	4·82	1375	5·55	1440	6·30	1500	6·96	1560	7·83	1616	8·55	1669	9·30	1723	10·0
45	1492	·139	940	3·20	1010	3·89	1080	4·63	1146	5·35	1202	6·16	1255	6·81	1309	7·80						
50	1212	·092	792	3·04	857	3·77	920	4·56	976	5·31												
55	1003	·063	685	3·08																		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**H.S.**  
**FANS**

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**7,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	2670	.445																						
40	2030	.257																						
45	1608	.161	614	1.08	652	1.26	677	1.42	708	1.58	735	1.75	764	1.93	789	2.09	838	2.41	883	2.79	924	3.15		
50	1303	.106	469	.84	508	.96	536	1.12	569	1.32	595	1.52	623	1.68	653	1.84	692	2.20	733	2.56	772	2.96		
55	1080	.073	379	.67	414	.84	445	1.00	474	1.17	500	1.34	524	1.51	547	1.67	591	2.11	627	2.48	664	2.85		
60	904	.051	315	.56	349	.72	378	.92	405	1.08	429	1.24	452	1.44	473	1.64	519	2.04	549	2.44				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	2670	.445	1552	4.71	1640	5.38	1721	6.07	1790	6.80	1860	7.55	1929	8.24	1998	9.05	2050	9.72	2112	10.4	2168	11.1
40	2030	.257	1190	3.88	1270	4.64	1347	5.36	1410	6.12	1479	6.84	1536	7.60	1595	8.48	1650	9.28	1705	10.0	1759	10.8
45	1608	.161	964	3.54	1032	4.24	1102	5.03	1163	5.79	1223	6.65	1278	7.48	1329	8.36	1380	9.24				
50	1303	.106	807	3.36	873	4.08	936	4.92	994	5.76	1046	6.64										
55	1080	.073	698	3.28																		

**7,500 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	2855	.510																						
40	2180	.296																						
45	1720	.185	653	1.28	684	1.46	707	1.62	738	1.80	764	2.00	791	2.18	816	2.36	864	2.70	909	3.08	948	3.46		
50	1397	.121	495	.97	531	1.11	558	1.30	588	1.49	615	1.69	643	1.88	666	2.05	711	2.41	752	2.80	790	3.18		
55	1160	.084	394	.77	430	.94	458	1.10	486	1.30	512	1.51	535	1.67	561	1.84	604	2.28	642	2.65	677	3.05		
60	970	.059	326	.64	360	.84	390	1.00	416	1.20	440	1.40	463	1.60	484	1.80	524	2.20	559	2.64	594	3.05		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	2855	.510	1615	5.33	1695	6.03	1775	6.79	1842	7.50	1915	8.32	1982	9.08	2043	9.90	2100	10.6	2160	11.4	2224	12.1
40	2180	.296	1231	4.41	1310	5.15	1385	5.95	1449	6.70	1515	7.55	1571	8.35	1630	9.25	1686	10.0	1738	10.9	1791	11.7
45	1720	.185	986	3.87	1059	4.61	1127	5.42	1189	6.24	1247	7.15	1300	8.00	1352	8.94	1401	9.81	1450	10.7	1500	11.5
50	1397	.121	825	3.62	890	4.43	955	5.26	1012	6.12	1064	7.07	1112	8.00								
55	1160	.084	711	3.55	770	4.39	828	5.30														

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# CYCLONE

**H·S**  
FANS

## H.S. CURVED BACK FANS

## PERFORMANCE TABLES

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**8,000 C.F.M.**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	3050	·581																						
40	2325	·338																						
45	1838	·211																						
50	1490	·139	518	1·12	717	1·71	740	1·91	1000	2·56	1020	2·76	1045	2·96	1069	3·12	1093	3·32	1138	3·68	1185	4·04	1229	4·44
55	1232	·095	412	·87	552	1·32	580	1·52	580	1·52	609	1·68	635	1·88	660	2·08	684	2·24	729	2·64	769	3·04	807	3·48
60	1032	·067	339	·72	447	1·07	474	1·27	503	1·47	528	1·64	553	1·84	575	2·04	617	2·48	655	2·88	690	3·32	602	3·28

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	3050	·581	1683	6·16	1760	6·88	1840	7·69	1909	8·44	1975	9·31	2043	10·1	2106	10·9	2161	11·7	2220	12·6	2280	13·4
40	2325	·338	1267	4·84	1345	5·64	1420	6·44	1480	7·24	1545	8·12	1605	8·96	1662	9·88	1715	10·7	1766	11·6	1820	12·4
45	1838	·211	1012	4·27	1083	5·07	1150	5·90	1211	6·75	1269	7·69	1322	8·56	1385	9·60	1422	10·5	1471	11·4	1520	12·3
50	1490	·139	842	3·82	906	4·76	970	5·68	1026	6·52	1080	7·56	1128	8·56	1176	9·60	1223	10·5				
55	1232	·095	724	3·75	779	4·70	836	5·66	888	6·60												
60	1032	·067	633	3·80																		

**8,500 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	3230	·652																						
40	2472	·381																						
45	1955	·239																						
50	1585	·157	546	1·30	760	2·00	774	2·18	1050	3·02	1069	3·20	1093	3·40	1117	3·60	1137	3·78	1180	4·18	1228	4·55	1269	4·98
55	1308	·107	428	1·01	577	1·49	605	1·68	633	1·88	657	2·10	682	2·32	706	2·52	751	2·91	790	3·32	827	3·77	870	4·19
60	1100	·075	350	·80	464	1·17	488	1·37	517	1·57	542	1·81	566	2·01	589	2·21	630	2·68	667	3·08	704	3·55	741	3·97

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35	3230	·652	1748	6·92	1826	7·72	1896	8·56	1968	9·35	2035	10·2	2100	11·1	2160	11·9	2218	12·8				
40	2472	·381	1305	5·38	1382	6·22	1453	7·08	1515	7·95	1579	8·90	1639	9·75	1695	10·7	1748	11·6	1800	12·5	1852	13·3
45	1955	·239	1037	4·66	1110	5·52	1176	6·41	1235	7·32	1293	8·26	1347	9·17	1398	10·2	1448	11·2	1495	12·2	1541	13·1
50	1585	·157	863	4·27	927	5·12	990	6·08	1035	6·98	1099	8·04	1145	9·04	1192	10·1	1239	11·2	1280	12·2		
55	1308	·107	735	4·05	795	4·96	854	5·94	904	6·94	953	8·05										
60	1100	·075	642	4·00	697	5·00																

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**H.S.**  
**FANS**

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**9,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2620	·429											1121	3·68	1144	3·88	1155	4·08	1185	4·32	1226	4·72	1270	5·12
45	2070	·268			790	2·27	810	2·45	834	2·66	856	2·88	885	3·08	904	3·31	947	3·69	990	4·14	1034	4·59	1080	5·04
50	1675	·176	581	1·48	605	1·72	627	1·92	654	2·12	678	2·36	703	2·60	726	2·80	767	3·20	809	3·64	845	4·12	885	4·60
55	1383	·120	447	1·17	481	1·34	506	1·54	533	1·81	558	2·01	583	2·24	605	2·41	646	2·88	683	3·35	719	3·85	759	4·35
60	1162	·085	364	·92	395	1·12	422	1·36	449	1·60	471	1·80	494	2·04	515	2·24	554	2·76	588	3·20	621	3·68	659	4·16

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2620	·429	1349	6·00	1422	6·84	1495	7·72	1555	8·68	1616	9·48	1677	10·5	1732	11·5	1785	12·4	1837	13·4	1890	14·3
45	2070	·268	1070	5·06	1140	5·97	1209	6·91	1265	7·84	1325	8·83	1377	9·80	1428	10·9	1476	11·9	1525	12·9	1574	13·8
50	1675	·176	879	4·60	944	5·52	1006	6·52	1060	7·52	1114	8·60	1161	9·60	1210	10·7						
55	1383	·120	750	4·36	810	5·30	867	6·37	919	7·38	966	8·52	1010	9·73								
60	1162	·085	653	4·28	706	5·28	760	6·40														

**9,500 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2770	·480											1172	4·18	1191	4·45	1212	4·62	1231	4·83	1270	5·27	1314	5·69
45	2185	·300			826	2·59	845	2·81	868	3·02	889	3·24	912	3·46	934	3·67	976	3·96	1019	4·55	1058	5·05	1099	5·55
50	1770	·196	602	1·69	629	1·91	648	2·13	675	2·35	697	2·60	723	2·82	745	3·02	786	3·46	826	3·91	864	4·44	904	4·94
55	1462	·134	465	1·30	497	1·51	522	1·74	548	1·94	571	2·18	595	2·44	617	2·65	657	3·08	694	3·58	729	4·09	767	4·60
60	1228	·094	375	1·04	409	1·28	433	1·48	460	1·72	483	1·96	505	2·20	526	2·40	565	2·96	599	3·40	631	3·92	667	4·44
70	900	·051	269	·76	299	·98	325	1·24	347	1·46	368	1·68	388	1·95	406	2·17	441	2·77	472	3·31	500	3·90	531	4·44

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2770	·480	1390	6·60	1461	7·50	1531	8·45	1592	9·43	1658	10·4	1717	11·4	1770	12·4	1824	13·4	1871	14·4	1923	15·3
45	2185	·300	1091	5·76	1162	6·48	1229	7·48	1285	8·45	1350	9·46	1393	10·4	1448	11·6	1496	12·6	1540	13·6	1590	14·7
50	1770	·196	897	4·94	962	5·85	1022	6·90	1078	7·92	1129	9·04	1178	10·1	1224	11·2	1269	12·3	1317	13·4	1360	14·5
55	1462	·134	760	4·59	820	5·60	877	6·70	929	7·75	976	8·91										
60	1228	·094	661	4·52	715	5·58	770	6·68														

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**

H.S. CUR  
STANDARD  
BAROMETRIC

Fan Size	Outlet Velocity ft. per min.
40	2915
45	2300
50	1860
55	1540
60	1300
70	950

Fan Size	Outlet Velocity ft. per min.
40	2915
45	2300
50	1860
55	1540
60	1300
70	950

Fan Size	Outlet Velocity ft. per min.
40	3200
45	2526
50	2055
55	1700
60	1420
70	1047

Fan Size	Outlet Velocity ft. per min.
40	3200
45	2526
50	2055
55	1700
60	1420
70	1047

MATTHE



# CYCLONE

**H·S**  
FANS

## H.S. CURVED BACK FANS

## PERFORMANCE TABLES

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

10,000 C.F.M.

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2915	·530															1261	5·20	1279	5·40	1315	5·80	1357	6·24	1393	6·72
45	2300	·331							881	3·20	900	3·40	922	3·64	944	3·87	965	4·10	1007	4·55	1049	5·02	1086	5·51		
50	1860	·214			655	2·16	673	2·40	696	2·60	720	2·84	744	3·12	765	3·32	807	3·76	846	4·28	882	4·76				
55	1540	·148	487	1·51	516	1·71	540	1·94	566	2·18	589	2·41	616	2·68	634	2·92	673	3·35	710	3·89	745	4·42				
60	1300	·106	390	1·20	421	1·40	445	1·64	471	1·88	495	2·16	516	2·40	536	2·60	575	3·12	609	3·64	641	4·20				
70	950	·056	276	·80	306	1·08	331	1·36	354	1·56	374	1·84	394	2·08	412	2·32	446	3·00	477	3·48	505	4·08				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	2915	·530	1430	7·24	1502	8·16	1569	9·16	1629	10·0	1690	11·2	1750	12·2	1803	13·3	1854	14·3	1908	15·4	1959	16·3
45	2300	·331	1120	6·00	1189	7·01	1255	8·26	1310	9·08	1368	10·1	1420	11·2	1472	12·3	1518	13·4	1567	14·6	1612	15·5
50	1860	·214	916	5·32	981	6·32	1041	7·36	1095	8·44	1149	9·60	1195	10·6	1242	11·9	1289	13·1	1330	14·2	1375	15·4
55	1540	·148	777	4·96	835	6·04	892	7·11	944	8·21	992	9·52										
60	1300	·106	671	4·80	725	5·88	779	7·04	826	8·24												
70	950	·056	532	4·76																		

11,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	3200	·640															1370	6·56	1381	6·80	1412	7·28	1450	7·76	1486	8·24
45	2526	·399											968	4·26	990	4·54	1010	4·80	1030	5·02	1068	5·51	1109	6·02	1144	6·52
50	2055	·264			701	2·70	721	2·92	742	3·19	765	3·48	786	3·75	805	4·00	845	4·44	885	5·00	920	5·56				
55	1700	·181	526	1·84	553	2·11	573	2·35	597	2·58	618	2·89	642	3·15	661	3·39	701	3·90	736	4·44	771	5·02				
60	1420	·126	417	1·44	447	1·68	470	1·96	495	2·20	516	2·48	539	2·80	559	3·00	596	3·60	630	4·12	661	4·72				
70	1047	·068	292	1·04	321	1·26	344	1·52	367	1·84	387	2·00	406	2·36	425	2·60	458	3·24	488	3·80	518	4·52				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40	3200	·640	1520	8·84	1590	9·88	1655	11·0	1711	12·0	1770	13·1	1830	14·3	1882	15·4	1932	16·5	1982	17·6	2035	18·7
45	2526	·399	1178	7·08	1242	8·20	1309	9·28	1362	10·4	1420	11·6	1472	12·7	1521	13·9	1569	15·1	1613	16·3	1660	17·4
50	2055	·264	953	6·11	1016	7·21	1077	8·40	1128	9·60	1181	10·6	1230	11·9	1274	13·2	1320	14·4	1361	15·6	1405	16·8
55	1700	·181	802	5·60	862	6·71	916	7·92	967	9·12	1030	10·4	1059	11·7	1102	13·1	1142	14·4	1182	15·7	1224	17·0
60	1420	·126	691	5·36	745	6·40	798	7·80	845	9·00	890	10·4	930	11·8	970	13·2	1010	14·6	1045	16·1	1083	17·4
70	1047	·068	544	5·20	592	6·50	637	7·88	679	9·34	717	10·9	755	12·6	789	14·0						

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



**H·S**  
FANS

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**12,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	2760	·486													1059	5·52	1074	5·75	1092	6·04	1125	6·58	1164	7·10
50	2235	·313									774	3·66	792	3·88	814	4·22	834	4·50	854	4·75	890	5·28	928	5·82
55	1848	·213	569	2·28	590	2·55	611	2·85	632	3·09	653	3·43	674	3·70	693	3·97	731	4·54	768	5·10	800	5·70		
60	1552	·151	447	1·80	475	2·04	496	2·36	520	2·60	540	2·92	562	3·20	581	3·44	619	4·04	651	4·64	682	5·28		
70	1138	·081	308	1·20	335	1·44	358	1·72	380	2·04	400	2·32	420	2·64	438	2·92	472	3·60	502	4·24	530	4·88		
80	876	·048	233	·92	258	1·27	281	1·49	301	1·85	319	2·14	337	2·48	353	2·84	384	3·55	409	4·25	436	4·96		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	2760	·486	1235	8·25	1298	9·40	1358	10·6	1414	11·8	1468	13·1	1520	14·3	1572	15·6	1615	16·8	1660	18·1	1708	19·2
50	2235	·313	994	7·08	1056	8·22	1116	9·48	1167	10·7	1220	12·0	1268	13·3	1312	14·7	1350	16·0	1397	17·3	1440	18·6
55	1848	·213	832	6·40	890	7·57	944	8·90	994	10·2	1040	11·5	1082	12·8	1128	14·4	1169	15·7	1205	17·1	1245	18·4
60	1552	·151	712	6·00	766	7·20	818	8·56	865	9·84	909	11·3	949	12·8	989	14·3						
70	1138	·081	557	5·70	603	7·08	649	8·48														
80	876	·048	459	5·75	502	7·39	541	8·95														

**13,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	3000	·562													1134	6·80	1150	7·10	1166	7·40	1196	7·92	1231	8·46
50	2420	·365											842	4·72	860	5·04	878	5·32	896	5·60	931	6·24	970	6·84
55	2000	·250			631	2·95	647	3·42	667	3·69	686	4·02	708	4·33	726	4·63	762	5·20	797	5·84	831	6·51		
60	1680	·176	479	2·16	504	2·48	523	2·76	545	3·04	565	3·40	585	3·68	605	4·00	640	4·60	674	5·24	704	5·92		
70	1232	·095	324	1·40	352	1·72	373	2·08	395	2·40	416	2·72	434	3·04	453	3·36	486	4·08	516	4·68	543	5·44		
80	945	·056	241	1·04	266	1·40	289	1·76	308	2·12	327	2·44	344	2·72	360	3·04	390	3·92	416	4·56	442	5·32		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	3000	·562	1297	9·81	1358	11·00	1418	12·3	1471	13·5	1528	15·0	1579	16·3	1627	17·7	1670	19·0	1716	20·4	1760	21·6
50	2420	·365	1034	8·12	1095	9·44	1154	10·6	1204	12·0	1255	13·4	1303	14·7	1348	16·2	1388	17·6	1431	19·0	1473	20·3
55	2000	·250	860	7·21	917	8·49	974	9·86	1020	11·2	1068	12·6	1112	14·0	1152	15·7	1195	17·1	1231	18·6	1271	19·9
60	1680	·176	733	6·44	786	7·92	839	9·40	885	10·80	929	12·3	969	13·8	1009	15·5	1046	17·0	1081	18·6		
70	1232	·095	570	6·20	616	7·64	661	9·24	703	10·8												
80	945	·056	465	6·24																		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**

H.S. CUR  
STANDARD  
BAROMETRIC

Fan Size	Outlet Velocity ft. per min.
45	3215
50	2608
55	2165
60	1808
70	1325
80	1018

Fan Size	Outlet Velocity ft. per min.
45	3215
50	2608
55	2165
60	1808
70	1325
80	1018

Fan Size	Outlet Velocity ft. per min.
50	2798
55	2315
60	1940
70	1420
80	1087

Fan Size	Outlet Velocity ft. per min.
50	2798
55	2315
60	1940
70	1420
80	1087

MATTHEW



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

14,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	3215	·646																				
50	2608	·426																				
55	2165	·293																				
60	1808	·204	511	2·64	532	2·96	550	3·28	570	3·56	590	3·88	610	4·24	628	4·56	662	5·20	695	5·88	725	6·60
70	1325	·110	340	1·68	368	2·00	388	2·32	410	2·72	430	3·04	448	3·44	466	3·68	498	4·40	527	5·16	556	5·88
80	1018	·065	251	1·20	277	1·56	298	1·92	318	2·28	336	2·56	353	2·96	368	3·32	398	4·16	425	4·88	450	5·68

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
45	3215	·646	1358	11·4	1417	12·7	1474	14·1	1529	15·4	1578	16·8	1634	18·3	1680	19·7	1722	21·1	1769	22·6	1811	24·00
50	2608	·426	1077	9·28	1137	10·6	1191	12·0	1241	13·4	1292	15·00	1340	16·4	1387	17·9	1427	19·4	1470	20·9	1510	22·2
55	2165	·293	890	8·10	946	9·50	1000	10·9	1046	12·3	1095	13·8	1139	15·4	1180	17·1	1219	18·6	1257	20·2	1295	21·6
60	1808	·204	755	7·40	808	8·80	859	10·2	904	11·8	947	13·4	988	14·9	1027	16·7	1065	18·3	1100	20·0	1137	21·4
70	1325	·110	581	6·76	627	8·28	674	9·92	714	11·5	751	13·2										
80	1018	·065	473	6·68	515	8·32																

15,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	2798	·490																				
55	2315	·335																				
60	1940	·235																				
70	1420	·126	359	2·00	385	2·32	403	2·72	424	3·04	444	3·44	462	3·80	480	4·12	512	4·88	541	5·64	569	6·48
80	1087	·074	262	1·44	286	1·76	307	2·12	327	2·56	345	2·92	361	3·28	378	3·64	407	4·56	433	5·24	458	6·12

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	2798	·490	1117	10·4	1175	11·9	1231	13·4	1280	14·9	1329	16·5	1377	18·0	1421	19·6	1461	21·2	1505	22·8	1545	24·2
55	2315	·335	917	8·99	974	10·4	1028	11·9	1072	13·4	1119	15·1	1162	16·6	1206	18·4	1241	20·0	1282	21·7	1320	23·1
60	1940	·235	776	8·20	830	9·68	880	11·2	925	12·8	969	14·5	1008	16·1	1046	18·0	1084	19·7	1120	21·4	1155	23·0
70	1420	·126	594	7·36	640	8·92	685	10·6	727	12·2	764	14·2	798	16·1	833	18·0						
80	1087	·074	481	7·12	522	8·88																

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



**H·S  
FANS**

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**16,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	2977	·552															1015	8·64	1043	9·00	1069	9·64	1102	10·3
55	2470	·381											776	5·92	792	6·30	808	6·70	825	7·05	860	7·80	891	8·52
60	2070	·268							591	4·04	607	4·36	624	4·72	641	5·12	660	5·48	677	5·88	710	6·56	741	7·36
70	1522	·145	377	2·32	403	2·88	420	3·04	442	3·44	459	3·84	478	4·24	495	4·60	527	5·32	555	6·20	582	7·08	592	7·36
80	1165	·085	272	1·60	296	2·00	316	2·40	337	2·84	353	3·20	370	3·60	389	3·96	415	4·84	440	5·68	466	6·60	482	7·56
90	920	·053	212	1·24	234	1·60	254	2·04	272	2·44	287	2·88	303	3·32	317	3·68	344	4·76	368	5·60	392	6·56	418	7·52

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	2977	·552	1160	11·9	1218	13·4	1271	15·0	1320	16·6	1367	18·2	1415	19·8	1460	21·4	1499	23·2	1539	24·8	1581	26·4
55	2470	·381	948	10·0	1002	11·6	1059	13·2	1102	14·8	1149	16·6	1191	18·3	1232	20·2	1270	21·8	1307	23·5	1348	25·1
60	2070	·268	798	9·00	851	10·6	901	12·2	945	13·9	989	15·6	1028	17·4	1062	19·4	1103	21·1	1139	23·0	1175	24·6
70	1522	·145	608	7·92	653	9·56	698	11·4	738	13·2	775	15·2	810	17·1	845	19·2	879	21·2	909	23·2		
80	1165	·085	490	7·60	530	9·44	570	11·3	606	13·2												
90	920	·053	411	7·64	448	9·72	484	11·8														

**17,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	3170	·630															1082	10·0	1094	10·3	1119	11·0	1147	11·8
55	2620	·429											819	6·90	834	7·36	850	7·71	865	8·10	894	8·91	928	9·62
60	2200	·302							622	4·64	636	5·04	652	5·40	669	5·84	686	6·24	703	6·60	734	7·36	766	8·20
70	1618	·164	397	2·64	420	3·04	438	3·44	457	3·80	474	4·28	493	4·68	509	5·12	540	5·88	568	6·76	595	7·64	622	8·52
80	1232	·095	285	1·92	307	2·27	326	2·70	346	3·12	363	3·55	380	3·90	396	4·33	425	5·32	452	6·10	476	7·10	502	8·08
90	978	·060	218	1·44	241	1·88	260	2·32	277	2·72	293	3·16	309	3·60	322	4·04	349	5·04	373	5·92	396	6·92	422	7·92

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	3170	·630	1205	13·5	1260	15·1	1314	16·8	1360	18·4	1409	20·1	1457	21·8	1500	23·6	1539	25·4	1579	27·1	1616	28·8
55	2620	·429	982	11·3	1038	13·0	1083	14·6	1130	16·3	1179	18·2	1219	19·6	1263	21·8	1298	23·6	1339	25·3	1374	27·0
60	2200	·302	820	9·92	874	11·6	923	13·4	965	15·0	1010	16·9	1048	18·7	1087	20·8	1123	22·6	1159	24·6	1199	26·2
70	1618	·164	620	8·56	665	10·3	710	12·2	750	14·0	788	16·0	821	18·0	855	20·2	889	22·4	915	24·4		
80	1232	·095	498	8·17	539	10·0	579	12·1	615	14·1												
90	978	·060	416	8·08																		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**

H.S. CUR  
STANDARD  
BAROMETRI

Fan Size	Outlet Velocity ft. per min.
50	3350
55	2780
60	2325
70	1706
80	1308
90	1033

Fan Size	Outlet Velocity ft. per min.
50	3350
55	2780
60	2325
70	1706
80	1308
90	1033

Fan Size	Outlet Velocity ft. per min.
55	2930
60	2450
70	1802
80	1380
90	1092

Fan Size	Outlet Velocity ft. per min.
55	2930
60	2450
70	1802
80	1380
90	1092

MATTHE



# CYCLONE

**H.S.**  
**FANS**

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

**18,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	3350	·700											1151	11·8	1174	12·6	1198	13·5	1227	14·4		
55	2780	·480											872	8·45	887	8·85	902	9·22	929	10·0	990	11·5
60	2325	·338											697	6·64	713	7·04	730	7·44	759	8·28	819	10·0
70	1706	·183	418	3·08	438	3·44	455	3·92	473	4·32	490	4·84	506	5·20	524	5·60	554	6·44	582	7·32	609	8·28
80	1308	·106	293	2·12	318	2·56	335	2·96	355	3·48	372	3·92	389	4·32	404	4·76	432	5·68	458	6·60	483	7·52
90	1033	·066	226	1·60	247	2·08	267	2·52	284	2·96	300	3·36	316	3·88	329	4·32	356	5·40	379	6·28	402	7·36

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	3350	·700	1255	15·4	1306	17·0	1357	18·7	1405	20·4	1449	22·3	1495	24·1	1541	26·0	1580	27·8	1620	29·6	1661	31·4
55	2780	·480	1013	12·5	1068	14·2	1118	16·1	1163	17·8	1207	19·7	1250	21·6	1290	23·6	1327	25·5	1365	27·3	1402	29·1
60	2325	·338	844	10·9	896	12·7	945	14·5	986	16·2	1030	18·2	1069	20·2	1109	22·2	1142	24·2	1182	26·2	1214	28·0
70	1706	·183	633	9·28	679	11·1	724	13·0	764	14·9	800	17·2	834	19·2	869	21·4	902	23·6	931	25·8	964	27·8
80	1308	·106	505	8·60	546	10·5	585	12·6	621	14·7	654	17·0										
90	1033	·066	422	8·56	458	9·92																

**19,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	2930	·532											913	9·65	925	10·0	938	10·4	964	11·2	995	12·0
60	2450	·375											725	7·48	740	7·92	755	8·36	785	9·24	816	10·1
70	1802	·204	439	3·52	457	3·96	471	4·40	489	4·84	505	5·32	523	5·76	538	6·24	568	7·08	597	8·00	622	8·96
80	1380	·119	307	2·40	330	2·84	347	3·28	366	3·76	382	4·24	399	4·75	414	5·20	442	6·12	468	7·08	492	8·16
90	1092	·075	233	1·80	255	2·24	273	2·68	286	3·24	306	3·68	322	4·12	335	4·68	362	5·76	385	6·68	407	7·72

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	2930	·532	1048	14·0	1098	15·7	1149	17·6	1194	19·4	1237	21·4	1280	23·4	1319	25·4	1352	27·4	1392	29·4	1430	31·9
60	2450	·375	868	11·9	919	13·8	968	15·7	1009	17·6	1051	19·8	1090	21·6	1129	23·8	1163	25·8	1198	27·9	1234	29·7
70	1802	·204	646	10·0	692	11·9	736	13·9	775	16·0	812	18·1	846	20·3	879	22·8	912	25·0	942	27·2	979	29·2
80	1380	·119	514	9·24	555	11·2	594	13·3	630	15·5	663	18·0	699	20·4								
90	1092	·075	427	9·00	464	11·2	500	13·2														

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# H·S FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

20,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	3085	·591															963	11·2	974	11·6	998	12·5	1024	13·3	1051	14·3
60	2590	·420									740	7·92	754	8·48	768	8·88	782	9·32	810	10·2	841	11·1	867	12·1		
70	1898	·226			479	4·48	488	4·88	505	5·28	521	5·80	539	6·32	554	6·80	584	7·60	610	8·57	635	9·54				
80	1455	·131	317	2·72	340	3·18	356	3·52	375	4·04	391	4·64	407	5·12	423	5·60	450	6·48	476	7·52	500	8·64				
90	1152	·082	240	2·08	262	2·44	280	2·96	298	3·40	313	3·96	327	4·48	342	4·96	368	6·00	391	7·08	412	8·16				
100	930	·054	191	1·64	212	2·08	229	2·64	246	3·12	260	3·52	273	4·12	286	4·56	310	5·92	331	7·04	352	8·32				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	3085	·591	1079	15·4	1130	17·2	1173	19·2	1218	21·1	1261	23·2	1307	25·2	1350	27·3	1380	29·3	1418	31·4	1457	33·4
60	2590	·420	891	13·0	941	15·0	990	17·0	1030	19·0	1072	21·2	1112	23·2	1150	25·5	1184	27·5	1219	29·7	1254	31·6
70	1898	·226	660	10·7	705	12·7	749	14·7	787	16·9	825	19·2	859	21·2	893	23·9	924	26·0	955	28·4	985	30·6
80	1455	·131	522	9·76	562	11·8	601	14·2	632	16·3	670	18·8	701	21·2	731	24·0						
90	1152	·082	433	9·44	470	11·8	505	14·2														

21,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	3250	·660															1005	12·7	1013	13·1	1035	14·0	1062	14·9	1088	15·9
60	2715	·460									770	9·00	784	9·52	797	9·92	810	10·4	836	11·4	865	12·2	893	13·2		
70	1992	·248	477	4·62	492	5·00	506	5·44	520	5·89	536	6·42	553	6·91	567	7·40	596	8·28	624	9·36	649	10·4				
80	1522	·144	331	3·06	352	3·55	368	4·05	387	4·48	401	5·12	418	5·61	434	6·04	461	6·97	486	8·11	510	9·23				
90	1210	·091	238	2·25	269	2·79	286	3·24	304	3·78	319	4·23	333	4·76	347	5·30	373	6·48	397	7·46	418	8·64				
100	975	·059	196	1·77	216	2·33	234	2·89	250	3·33	264	3·78	278	4·34	291	4·88	315	6·22	336	7·44	357	8·66				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55	3250	·660	1112	17·1	1161	19·0	1207	21·1	1250	23·0	1292	25·1	1338	27·3	1377	29·5	1411	31·6	1446	33·8	1485	35·8
60	2715	·460	916	14·3	965	16·3	1012	18·4	1052	20·6	1094	22·8	1134	24·9	1171	27·2	1205	29·4	1240	31·6	1275	33·6
70	1992	·248	673	11·6	718	13·6	762	15·9	799	18·1	836	20·4	871	22·6	904	24·9	935	27·6	964	30·0	996	32·3
80	1522	·144	532	10·4	572	12·6	610	14·9	646	17·2	679	19·8	709	22·4								
90	1210	·091	439	9·99	474	11·8	510	14·8	543	17·3												

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

**22,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		8" RH		10" RH		12" RH		14" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
55	3400	.720														1052	14.3	1073	15.3	1098	16.3	1121	17.3
60	2842	.505										815	10.6	826	11.0	839	11.6	863	12.6	891	13.4	919	14.4
70	2085	.271			512	5.61	525	6.08	540	6.56	555	7.16	570	7.60	585	8.16	612	9.12	640	10.2	665	11.4	
80	1600	.160	345	3.40	365	3.82	381	4.40	398	4.88	413	5.42	429	6.04	447	6.52	471	7.60	495	8.68	520	9.80	
90	1264	.099	256	2.48	276	3.04	293	3.56	311	4.00	326	4.68	341	5.24	355	5.72	380	6.84	403	8.00	425	9.12	
100	1023	.066	203	2.00	222	2.44	240	2.96	256	3.52	270	4.00	283	4.64	296	5.20	320	6.52	340	7.64	360	8.88	

[illegible]

**23,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		8" RH		10" RH		12" RH		14" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	2975	·550									845	11·8	856	12·3	867	12·8	890	13·8	917	14·8	944	15·8
70	2180	·297			541	6·26	548	6·81	557	7·24	572	7·85	587	8·38	600	8·94	628	9·97	655	11·1	680	12·2
80	1680	·176	360	3·91	378	4·41	393	4·91	409	5·40	424	6·04	439	6·61	455	7·11	480	8·18	510	9·31	529	10·5
90	1320	·109	264	2·79	284	3·33	300	3·87	318	4·32	333	5·04	347	5·58	361	6·03	387	7·29	410	8·46	431	9·72
100	1070	·072	207	2·22	227	2·78	244	3·22	260	3·89	274	4·33	288	5·00	300	5·55	324	6·89	345	8·10	365	9·44

[illegible]

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

24,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3105	·603													887	13·6	897	14·2	919	15·2	944	16·2
70	2280	·325													603	9·12	617	9·64	644	10·7	670	11·8
80	1745	·190	370	4·24	387	4·80	561	7·40	575	7·96	587	8·56	447	7·04	462	7·52	487	8·64	508	9·76	535	11·0
90	1380	·119	272	3·08	293	3·60	401	5·28	417	5·92	432	6·48	340	5·40	358	5·92	368	6·56	393	7·72	416	9·00
100	1120	·078	212	2·32	231	2·88	309	4·12	326	4·76	340	5·40	278	4·56	291	5·28	304	5·76	327	7·20	348	8·48
110	925	·053	174	2·00	192	2·54	248	3·44	263	4·12	278	4·56	223	3·76	248	4·96	260	5·64	281	7·12	301	8·44

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3105	·603	991	18·6	1038	20·8	1081	23·2	1121	25·6	1160	28·0	1201	30·5	1237	33·0	1270	35·4	1304	37·9	1338	40·0
70	2280	·325	715	14·3	760	16·5	804	19·1	840	21·4	876	24·1	910	26·6	944	29·4	974	32·1	1001	34·8	1033	37·2
80	1745	·190	557	12·4	597	15·3	635	17·4	670	20·0	702	22·8	733	25·6	760	28·5	790	31·5	817	34·1	844	36·9
90	1380	·119	454	11·6	493	14·2	527	17·0	560	19·8	590	22·8										
100	1120	·078	386	11·3	419	14·0	450	17·1														

25,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		2" RH		3" RH		4" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3230	·651													920	15·1	929	15·6	949	16·6	973	17·8
70	2370	·350													621	10·0	635	10·5	660	11·7	686	12·8
80	1820	·206	396	4·96	411	5·32	423	5·75	438	6·25	452	7·04	466	7·60	480	8·18	506	9·02	531	10·5	553	11·8
90	1430	·127	281	3·24	301	3·96	313	4·50	333	5·13	347	5·76	363	6·39	375	6·93	400	8·19	424	9·45	443	10·8
100	1160	·084	219	2·56	237	3·11	253	3·78	270	4·44	283	5·00	297	5·55	309	6·16	333	7·56	353	8·88	373	10·3
110	960	·057	177	2·02	194	2·69	211	3·36	225	4·04	239	4·58	252	5·25	264	5·92	285	7·40	304	8·75	323	10·2

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3230	·651	1020	20·3	1064	22·6	1108	25·1	1146	27·4	1185	30·1	1225	32·8	1260	35·2	1293	37·7	1325	40·2	1360	42·6
70	2370	·350	733	15·0	776	17·9	819	20·3	854	22·8	890	25·6	924	29·2	958	31·1	986	33·7	1018	36·4	1049	38·8
80	1820	·206	574	13·2	614	15·7	652	18·3	685	21·1	718	23·8	748	26·6	778	30·0	806	32·8	832	35·7	860	38·3
90	1430	·127	463	12·1	499	14·8	534	17·7	566	20·5	596	23·7	623	27·0								
100	1160	·084	392	11·8	424	14·6	456	17·7														

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**H.S.**  
**FANS**

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

**26,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3370	·708											960	17·0	977	18·2	999	19·5	1022	20·6
70	2470	·381											649	11·2	675	12·8	701	13·9	724	15·2
80	1890	·223	397	5·20	413	5·80	426	6·40	440	6·88	455	7·52	470	8·24	482	8·88	507	9·96	532	11·2
90	1492	·139	290	3·68	309	4·32	325	4·92	339	5·48	354	6·20	367	6·84	382	7·36	406	8·64	427	10·0
100	1212	·092	224	2·76	243	3·32	258	4·00	274	4·64	288	5·20	305	5·68	313	6·44	337	7·96	358	9·20
110	1003	·063	176	2·28	199	2·92	215	3·60	233	4·28	243	4·68	255	5·36	266	6·04	287	7·64	308	8·96

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60	3370	·708	1045	22·2	1089	24·5	1131	27·0	1170	29·4	1206	32·0	1247	34·7	1282	37·4	1315	40·0	1348	42·7
70	2470	·381	746	16·5	789	19·1	832	21·7	865	24·4	901	27·2	936	29·9	970	32·9	997	35·6	1030	38·4
80	1890	·223	575	14·0	616	16·5	655	19·2	687	22·2	720	25·2	750	27·7	780	31·3	808	34·2	834	37·2
90	1492	·139	470	12·8	505	15·5	540	18·5	573	21·4	601	24·6	627	27·2	654	31·2				
100	1212	·092	396	12·1	428	15·0	460	18·2	488	21·2										
110	1003	·063	342	12·3																

**27,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2580	·416											667	12·3	691	13·6	718	14·8	740	16·0
80	1955	·240	414	5·81	427	6·39	438	6·89	452	7·45	466	8·15	481	8·88	495	9·52	519	10·5	543	12·0
90	1552	·151	265	4·05	317	4·59	331	5·22	347	5·85	360	6·56	375	7·20	387	7·74	413	9·09	434	10·4
100	1258	·098	228	3·00	249	3·66	267	4·33	279	5·00	294	5·55	306	6·22	318	7·00	341	8·33	362	9·78
110	1038	·067	185	2·42	203	3·09	219	3·76	234	4·34	246	4·97	258	5·78	270	6·45	292	8·06	311	9·40

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2580	·416	761	17·4	804	20·0	846	22·8	880	25·5	917	28·4	950	31·1	983	34·1	1011	36·9	1042	39·8
80	1955	·240	586	14·7	626	17·4	664	20·2	697	23·1	730	26·2	760	29·0	788	32·6	817	35·4	844	38·6
90	1552	·151	475	13·5	510	16·2	546	19·2	573	22·1	607	25·4	633	28·8	660	32·2	685	35·6		
100	1258	·098	400	12·8	432	15·7	464	19·0	493	22·2										
110	1038	·067	346	12·9																

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**H·S**  
FANS

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**28,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2660	-445											650	11.6	660	12.3	672	12.9	685	13.6	706	14.8	734	16.1
80	2030	-257							439	6.88	450	7.52	464	8.16	477	8.96	491	9.60	505	10.1	528	11.3	552	12.8
90	1610	-161	307	4.32	326	4.96	338	5.68	354	6.32	367	7.00	382	7.72	394	8.36	419	9.64	441	11.1	462	12.6	486	14.1
100	1303	-106	234	3.36	254	3.84	268	4.48	284	5.28	297	6.08	311	6.72	326	7.36	346	8.80	366	10.2	386	11.8	410	13.4
110	1080	-073	189	2.68	207	3.32	222	4.00	237	4.68	250	5.36	262	6.04	273	6.68	295	8.44	313	9.92	332	11.4	352	13.0
120	905	-051	157	2.24	174	2.88	189	3.68	202	4.32	214	4.96	226	5.76	236	6.56	259	8.16	274	9.76	291	11.5	310	13.1

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2660	-445	776	18.8	820	21.5	860	24.2	895	27.2	930	30.2	964	32.9	999	36.2	1025	38.8	1056	41.6	1084	44.4
80	2030	-257	595	15.5	635	18.5	678	21.4	705	24.4	739	27.2	768	30.4	797	33.9	825	37.1	852	40.0	879	43.2
90	1610	-161	482	14.1	516	16.9	551	20.1	581	23.1	611	26.6	639	29.9	664	33.4	690	36.9				
100	1303	-106	403	13.4	436	16.3	468	19.6	497	23.0	523	26.5	547	30.4								
110	1080	-073	349	13.5	379	16.4																

**29,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2750	-473											669	12.6	679	13.4	692	14.0	702	14.6	724	15.9	748	17.1
80	2110	-278							452	7.52	464	8.16	476	8.80	489	9.58	503	10.2	515	10.9	540	12.1	564	13.5
90	1665	-173	317	4.86	333	5.49	347	6.12	362	6.75	375	7.56	389	8.19	401	8.82	425	10.2	447	11.7	468	13.1	490	14.6
100	1348	-114	241	3.56	261	4.12	274	5.00	290	5.68	303	6.34	317	7.12	328	7.79	351	9.24	372	10.6	391	12.3	410	13.9
110	1110	-077	194	2.82	211	3.50	226	4.17	241	4.98	253	5.65	265	6.32	277	7.14	299	8.75	317	10.2	336	11.8	355	13.4
120	935	-055	160	2.40	177	3.20	192	3.84	205	4.48	217	5.12	228	5.92	237	6.72	259	8.48	277	10.0	294	11.9	313	13.6

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2750	-473	794	20.0	834	22.8	874	25.6	910	28.5	944	31.6	978	34.5	1010	37.7	1038	40.6	1069	43.7	1099	46.6
80	2110	-278	605	16.6	645	19.5	683	22.4	715	25.5	747	28.7	778	31.7	807	35.2	833	38.4	860	41.9	888	44.7
90	1665	-173	487	14.8	523	17.7	557	20.8	588	24.0	618	27.7	644	30.8	671	34.6	696	38.1	720	41.6		
100	1348	-114	408	14.0	441	17.1	474	20.4	501	23.8	528	27.4										
110	1110	-077	352	13.7	382	16.9																
120	935	-055	309	13.7																		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# CYCLONE

**H·S  
FANS**

## H.S. CURVED BACK FANS

## PERFORMANCE TABLES

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**30,000 C.F.M.**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2855	·510																				
80	2180	·296			467	8·24	478	8·96	489	9·60	699	14·4	710	15·1	720	15·8	740	17·1	765	18·3	787	19·7
90	1720	·185	326	5·12	342	5·84	353	6·48	369	7·20	502	10·3	515	11·0	527	11·7	551	13·1	575	14·5	595	16·0
100	1397	·121	247	3·88	265	4·44	279	5·20	294	5·96	382	8·00	395	8·72	408	9·44	432	10·8	454	12·3	474	13·8
110	1160	·084	197	3·08	215	3·76	229	4·40	243	5·20	307	6·76	321	7·58	333	8·20	355	9·60	376	11·2	395	12·7
120	970	·059	163	2·56	180	3·36	195	4·00	208	4·80	256	6·04	267	6·68	280	7·36	302	9·12	321	10·6	338	12·2
											220	5·60	231	6·40	242	7·20	262	8·80	279	10·5	297	12·2

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	2855	·510	807	21·3	847	24·1	887	27·1	921	30·0	957	33·2	991	36·3	1021	39·6	1050	42·4	1080	45·6	1112	48·4
80	2180	·296	615	17·6	655	20·6	692	23·8	724	26·8	757	30·2	785	33·4	815	37·0	843	40·0	869	43·6	895	46·8
90	1720	·185	493	15·4	529	18·4	563	21·6	594	24·9	623	28·6	650	32·0	676	35·7	700	39·2	725	42·8	750	46·0
100	1397	·121	412	14·4	445	17·7	477	21·0	506	24·4	532	28·2	556	32·0								
110	1160	·084	355	14·2	385	17·5	414	21·2														

**32,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	3050	·581																				
80	2325	·338																				
90	1838	·211			358	6·84	370	7·64	384	8·28	397	9·08	410	9·92	421	10·6	445	12·0	467	13·6	487	15·3
100	1490	·139	259	4·48	276	5·28	290	6·08	304	6·72	317	7·52	330	8·32	342	8·96	364	10·5	384	12·1	403	13·9
110	1232	·095	206	3·48	223	4·28	237	5·08	251	5·88	264	6·56	276	7·36	287	8·16	308	9·92	327	11·5	345	13·2
120	1032	·067	169	2·88	185	3·68	200	4·72	213	5·28	225	5·92	237	6·88	247	7·68	267	9·60	284	11·2	301	13·1

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	3050	·581	841	24·6	880	27·5	920	30·7	954	33·7	987	37·2	1021	40·4	1053	43·6	1080	46·8	1110	50·4	1140	53·6
80	2325	·338	633	19·3	672	22·5	710	25·7	740	28·9	777	32·4	802	35·7	831	39·5	857	42·8	883	46·4	910	49·6
90	1838	·211	506	17·0	541	20·2	575	23·6	605	27·0	634	30·7	661	34·2	692	38·4	711	42·0	735	45·6	760	49·2
100	1490	·129	421	15·2	453	19·0	485	22·7	513	26·0	540	30·2	564	34·2	588	38·4						
110	1232	·095	362	15·0	389	18·8	418	22·6	444	26·4												
120	1032	·067	316	15·2																		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# H·S FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

34,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	3230	·652																						
80	2472	·381																						
90	1955	·239			380	8·00	387	8·72	400	9·36	414	10·3	425	11·1	437	12·0	459	13·3	481	15·0	500	16·7		
100	1585	·157	273	5·20	288	5·96	302	6·72	316	7·52	328	8·40	341	9·28	353	10·0	375	11·6	395	13·2	413	15·0		
110	1308	·107	214	4·04	232	4·68	244	5·48	258	6·28	271	7·24	283	8·04	294	8·84	315	9·72	333	12·3	352	14·2		
120	1100	·075	175	3·20	192	4·00	205	4·80	219	5·76	230	6·56	241	7·36	252	8·32	272	10·20	289	12·0	305	13·7		
130	935	·054	147	2·82	163	3·76	177	4·51	189	5·26	200	6·02	211	6·96	219	7·90	239	9·98	256	11·8				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	3230	·652	874	27·6	913	30·8	948	34·2	984	37·4	1017	40·8	1050	44·4	1080	47·6	1109	51·2	1135	54·8	1165	58·2
80	2472	·381	652	21·5	691	24·8	721	28·3	757	31·8	789	35·6	819	39·0	842	42·8	874	46·4	900	50·0	926	53·2
90	1955	·239	518	18·6	555	22·0	588	25·6	617	29·2	646	33·0	673	36·6	699	40·8	724	44·8	747	48·8	770	52·4
100	1585	·157	431	17·0	463	20·4	495	24·3	517	27·9	549	32·1	572	36·1	596	40·4	619	44·8	640	48·8		
110	1308	·107	367	16·2	397	19·8	427	23·7	452	27·7	476	32·2										
120	1100	·075	321	16·0	348	20·0																

36,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2620	·430							560	14·7	572	15·5	577	16·3	592	17·2	613	18·8	635	20·4	656	22·0		
90	2070	·268			395	9·08	405	9·80	417	10·6	428	11·5	442	12·3	452	13·2	473	14·7	495	16·5	517	18·3		
100	1675	·184	290	5·92	302	6·88	313	7·68	327	8·48	339	9·44	351	10·4	363	11·2	383	12·8	404	14·5	422	16·4		
110	1383	·119	223	4·68	240	5·36	253	6·16	266	7·24	279	8·04	291	8·96	302	9·64	323	11·5	341	13·4	359	15·4		
120	1162	·084	182	3·68	197	4·48	211	5·44	224	6·40	235	7·20	247	8·16	257	8·96	277	11·0	294	12·8	310	14·7		
130	990	·061	152	3·19	168	4·13	182	4·88	194	5·63	205	6·57	215	7·50	224	8·45	244	10·7	260	12·5	276	14·6		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2620	·430	674	24·0	711	27·3	747	30·8	777	34·7	808	37·9	838	42·0	866	46·0	892	49·6	918	53·6	945	57·2
90	2070	·268	535	20·2	570	23·8	604	27·6	632	31·3	662	35·3	688	39·2	714	43·6	738	47·6	762	51·6	787	55·6
100	1675	·184	439	18·4	472	22·0	503	26·0	530	30·0	557	34·4	580	38·4	605	42·8						
110	1383	·119	375	17·4	405	21·2	433	25·4	459	29·5	483	34·0	505	38·9								
120	1162	·084	326	17·1	353	21·1	380	25·6														
130	990	·061	289	17·2																		

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

38,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2770	·480																						
90	2185	·300			413	10·3	422	11·2	434	12·0	444	12·9	456	13·8	467	14·6	488	15·8	509	18·2	529	20·2	676	24·4
100	1770	·196	301	6·76	314	7·64	324	8·52	337	9·40	348	10·4	361	11·2	372	12·0	393	13·8	413	15·6	432	17·7	432	17·7
110	1462	·134	232	5·20	248	6·04	261	6·96	274	7·76	285	8·72	297	9·76	308	10·6	328	12·3	347	14·3	364	16·3	364	16·3
120	1228	·094	187	4·16	204	5·12	216	5·92	230	6·88	241	7·74	252	8·80	263	9·60	282	11·7	299	13·6	315	15·6	315	15·6
130	1050	·068	157	3·38	173	4·31	185	5·25	198	6·19	208	7·12	219	8·06	229	9·20	247	11·2	264	13·3	279	15·5	279	15·5
140	900	·051	134	3·04	149	3·92	162	4·96	173	5·94	184	6·72	194	7·80	203	8·68	220	11·0	236	13·2	236	13·2		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2770	·480	695	26·4	730	30·0	765	33·8	796	37·7	829	41·6	858	45·6	885	49·6	912	53·6	935	57·6	961	61·2
90	2185	·300	545	23·0	581	25·9	614	29·9	642	33·8	675	37·8	696	41·6	724	46·4	748	50·4	770	54·4	795	58·8
100	1770	·196	448	19·7	481	23·4	511	27·6	539	31·6	564	36·0	584	40·4	612	44·8	634	49·2	658	53·6	680	58·0
110	1462	·134	380	18·3	410	22·4	438	26·8	464	31·0	488	35·6										
120	1228	·094	330	18·0	357	22·3	385	26·7														
130	1050	·068	293	18·0																		

40,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2915	·530															630	20·8	639	21·6	657	23·2	678	24·9
90	2300	·331							440	12·8	450	13·6	461	14·5	472	15·4	482	16·4	503	18·2	524	20·0	543	22·0
100	1860	·214			327	8·64	336	9·60	348	10·0	360	11·3	372	12·4	382	13·2	403	15·0	423	17·1	441	19·0	441	19·0
110	1540	·148	243	6·04	258	6·84	270	7·76	283	8·72	294	9·64	308	10·7	317	11·6	336	13·4	355	15·5	372	17·6	372	17·6
120	1300	·106	195	4·80	210	5·60	222	6·56	235	7·52	247	8·56	258	9·60	268	10·4	287	12·4	304	14·5	320	16·8	320	16·8
130	1100	·075	162	3·76	177	4·70	190	5·64	202	6·76	213	7·70	223	8·82	233	9·78	251	12·1	267	14·1	282	16·4	282	16·4
140	950	·056	138	3·20	153	4·32	165	5·36	177	6·16	187	7·36	197	8·32	206	9·28	223	12·0	238	13·9	252	16·3	252	16·3

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	2915	·530	715	28·9	751	32·6	784	36·6	814	40·0	845	44·8	875	48·8	901	53·2	927	57·2	954	61·6	979	65·2
90	2300	·331	560	24·0	594	28·0	627	33·0	655	36·3	684	40·4	710	44·8	736	49·2	759	53·6	783	58·4	806	62·0
100	1860	·214	458	21·2	490	25·2	520	29·4	547	33·7	574	38·4	597	42·4	621	47·6	644	52·4	665	56·8	687	61·6
110	1540	·148	388	19·8	417	24·1	446	28·4	472	32·8	496	38·0										
120	1300	·106	335	19·2	362	23·5	389	28·1	413	32·9												
130	1100	·075	297	19·0																		



# H.S FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

42,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET

SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3050	·580											648	22·4	656	23·4	664	24·2	681	25·9	700	27·7	719	29·8										
90	2415	·364											477	16·2	488	17·1	498	18·0	518	20·0	539	22·0	557	23·9										
100	1955	·238	330	8·88	340	9·89	350	10·7	361	11·6	372	12·7	384	13·7	394	14·7	413	16·4	434	18·5	452	20·6												
110	1620	·163	252	6·60	267	7·54	278	8·48	291	9·42	302	10·5	313	11·5	324	12·6	344	14·5	361	16·6	378	18·8												
120	1360	·115	201	5·12	218	6·24	229	7·20	242	8·17	253	9·13	264	10·4	274	11·3	293	13·4	310	15·5	326	17·7												
130	1155	·083	168	4·31	183	5·25	195	6·20	207	7·30	218	8·44	228	9·39	238	10·3	256	12·9	272	15·0	287	17·2												
140	1000	·062	142	3·70	156	4·79	169	5·88	180	6·75	191	7·84	200	8·92	208	9·80	226	12·4	241	14·6	256	17·2												

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3050	·580	737	32·1	771	35·8	802	40·0	835	44·0	865	48·5	895	52·8	921	57·2	946	61·4	971	65·7	998	69·9
90	2415	·364	574	26·0	607	30·2	640	34·3	668	38·6	695	43·2	723	47·6	748	52·4	770	56·8	795	61·5	819	65·4
100	1955	·238	468	23·1	500	27·2	530	31·7	557	36·1	583	40·8	607	45·2	630	50·7	652	55·4	674	60·3	692	64·7
110	1620	·163	394	21·1	423	25·6	452	30·2	477	34·6	504	39·8	523	44·7	545	50·0	566	55·1	585	60·5		
120	1360	·115	341	20·3	368	24·8	395	29·6	418	34·4	440	39·7										
130	1155	·083	302	19·8	227	24·5	351	29·8														
140	1000	·062	269	19·8																		

44,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3200	·640											685	26·2	690	27·2	706	29·1	725	31·0	743	32·9												
90	2525	·399											505	19·2	515	20·0	534	22·0	554	24·0	572	26·0												
100	2055	·264			350	10·8	360	11·6	371	12·7	382	13·9	393	15·0	402	16·0	422	17·7	442	20·0	460	22·2												
110	1700	·181	263	7·36	276	8·44	286	9·40	298	10·3	309	11·5	321	12·6	330	13·5	350	15·6	368	17·7	385	20·0												
120	1420	·126	208	5·76	223	6·72	235	7·76	247	8·80	258	9·92	269	11·2	279	12·0	298	14·4	315	16·4	330	18·8												
130	1212	·092	172	4·70	187	5·82	198	6·76	211	7·90	222	9·02	232	10·1	242	11·2	260	13·5	276	15·9	291	18·2												
140	1047	·068	146	4·16	160	5·04	172	6·08	183	7·26	193	8·00	203	9·44	212	10·4	229	12·9	244	15·2	259	18·0												
150	910	·052	126	3·50	140	4·50	152	5·75	162	6·75	172	7·75	181	9·00	190	10·2	206	12·9																

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3200	·640	760	35·3	795	39·5	827	44·0	855	48·0	885	52·4	915	57·2	941	61·6	966	66·0	991	70·4	1017	74·8
90	2525	·399	589	28·3	621	32·8	654	37·1	681	41·6	710	46·4	736	50·8	760	55·6	784	60·4	806	65·2	830	69·6
100	2055	·264	476	24·4	508	28·8	538	33·6	564	38·4	590	42·4	615	47·6	637	52·8	660	57·6	680	62·4	702	67·2
110	1700	·181	401	22·4	431	26·8	458	31·6	483	36·4	515	40·1	529	46·8	551	52·4	571	57·6	591	62·8	612	68·0
120	1420	·126	345	21·4	372	25·6	399	31·2	422	36·0	445	41·6	465	47·2	485	52·8	505	58·4	522	64·4	541	69·6
130	1212	·092	305	21·0	330	25·6	354	31·2														
140	1047	·068	272	20·8	296	26·0																

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.

H.S. CUR  
STANDARD  
BAROMETRIC

Fan Size	Outlet Velocity ft. per min.
80	3340
90	2640
100	2130
110	1765
120	1485
130	1265
140	1090
150	950

Fan Size	Outlet Velocity ft. per min.
80	3340
90	2640
100	2130
110	1765
120	1485
130	1265
140	1090

Fan Size	Outlet Velocity ft. per min.
90	2760
100	2235
110	1848
120	1552
130	1320
140	1138
150	1000

Fan Size	Outlet Velocity ft. per min.
90	2760
100	2235
110	1848
120	1552
130	1320
140	1138

MATTHE



# CYCLONE

**H.S.**  
**FANS**

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**46,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3340	.697																				
90	2640	.435																				
100	2130	.283			366	12.2	375	13.2	384	14.1	395	15.3	406	16.4	416	17.4	435	19.4	454	21.7	471	24.1
110	1765	.195	273	8.35	286	9.42	296	10.3	307	11.4	318	12.6	329	13.7	339	14.6	358	16.8	376	19.1	392	21.5
120	1485	.138	216	6.40	231	7.52	242	8.65	254	9.60	264	10.7	275	12.0	285	12.9	303	15.1	320	17.6	336	20.0
130	1265	.100	177	5.21	192	6.34	203	7.46	215	8.58	226	9.50	236	10.7	246	11.8	264	14.2	279	16.7	294	19.1
140	1090	.074	150	4.36	164	5.45	175	6.55	187	7.63	197	8.72	207	9.81	216	11.1	232	13.9	248	16.1	261	18.7
150	950	.056	129	3.75	142	5.00	154	6.25	165	7.25	174	8.50	184	9.50	192	10.7	208	13.7	223	16.2		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
80	3340	.697	785	39.0	816	43.4	850	47.9	878	52.2	906	56.9	935	61.7	962	66.4	988	71.0				
90	2640	.435	602	30.6	635	35.1	666	39.6	694	44.4	723	49.3	750	53.8	774	59.0	796	63.6	820	68.6	843	73.0
100	2130	.283	487	26.4	519	31.1	549	36.0	575	40.5	601	45.5	624	50.5	648	56.0	669	61.0	690	66.5	713	71.0
110	1765	.195	407	23.9	437	28.6	465	33.3	490	38.5	514	43.9	536	49.1	557	54.7	577	60.4	598	65.8	618	70.9
120	1485	.138	351	22.6	378	27.4	404	32.6	427	37.6	450	43.5	470	49.3								
130	1265	.100	308	21.9	333	27.0	358	32.4	380	37.9												
140	1090	.074	275	21.8	298	27.2																

**48,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	2760	.486									529	22.0	537	23.0	546	24.1	562	26.2	582	28.4	600	30.6		
100	2235	.313					387	14.6	396	15.5	407	16.8	417	18.0	427	19.0	445	21.5	464	23.2	481	25.7		
110	1848	.213	284	9.10	295	10.2	305	11.4	316	12.3	326	13.7	337	14.8	346	15.8	365	18.1	384	20.4	400	22.8		
120	1552	.151	223	7.20	237	8.16	248	9.44	260	10.4	270	11.6	281	12.8	290	13.7	309	16.1	325	18.5	341	21.1		
130	1320	.108	183	5.81	196	6.94	208	8.08	219	9.00	230	10.5	241	11.6	250	12.5	268	15.2	284	17.6	299	20.3		
140	1138	.081	154	4.80	167	5.76	179	6.88	190	8.16	200	9.28	210	10.5	219	11.6	236	14.4	251	16.9	265	19.5		
150	1000	.062	132	4.25	146	5.50	159	6.75	168	7.75	179	9.00	186	10.2	194	11.2	211	14.2	225	16.7	238	19.7		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	2760	.486	617	33.0	649	37.6	679	42.4	707	47.2	734	52.4	760	57.2	786	62.4	807	67.2	830	72.4	854	76.8
100	2235	.313	497	28.3	528	32.8	558	37.9	583	42.8	610	48.0	634	53.2	656	58.8	675	64.0	698	69.2	720	74.4
110	1848	.213	416	25.6	445	30.2	472	35.6	497	40.8	520	46.0	541	51.2	564	57.6	584	62.8	602	68.4	622	73.6
120	1552	.151	356	24.0	383	28.8	409	34.2	432	39.3	454	45.2	474	51.2	494	57.2						
130	1320	.108	313	23.1	338	28.3	362	34.0	384	39.6												
140	1138	.081	278	22.8	301	28.3	324	33.9														

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# H·S FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

50,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET

SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	2875	-515													547	24.4	555	25.6	565	26.7	580	28.8	598	30.9
100	2325	-337			393	15.0	400	16.1	409	17.2	418	18.3	428	19.5	437	20.6	456	23.0	475	25.2	492	27.8		
110	1920	-230	295	10.2	305	11.4	314	12.6	324	13.6	335	14.9	345	16.1	354	17.3	373	19.4	391	21.8	407	24.4		
120	1615	-162	231	7.85	245	8.95	255	10.1	266	11.2	276	12.5	286	13.7	296	15.0	314	17.3	331	19.8	347	22.4		
130	1375	-118	188	6.38	202	7.50	213	8.62	224	9.75	235	11.0	245	12.3	254	13.5	272	15.9	288	18.5	302	21.2		
140	1190	-088	158	5.44	171	6.52	182	7.60	194	8.70	204	10.0	214	11.3	223	12.4	239	15.2	254	17.8	268	20.6		
150	1030	-066	135	4.50	148	5.75	160	7.00	170	8.25	180	9.25	189	10.5	198	12.0	214	15.0	227	17.5	241	20.5		
160	910	-051	118	3.99	131	5.41	142	6.55	152	7.70	161	8.82	170	10.2	178	11.6	193	14.8	206	17.6				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	2875	-515	632	36.0	664	40.5	694	45.6	721	50.5	749	55.8	775	61.0	799	66.5	822	71.5	844	76.7	867	81.5
100	2325	-337	507	30.2	538	35.3	567	40.2	592	45.2	618	50.8	642	56.0	665	61.8	685	67.2	706	72.8	729	77.8
110	1920	-230	422	27.2	451	32.3	479	37.3	504	42.6	527	48.5	548	53.8	570	60.4	591	66.0	609	71.6	630	77.0
120	1615	-162	361	25.1	388	30.4	414	35.9	437	41.2	461	47.4	479	53.1	498	59.6	517	65.7				
130	1375	-118	316	24.2	340	29.4	366	35.0	387	41.0	408	47.2	428	53.8								
140	1190	-088	281	23.8	304	29.2	328	35.1														
150	1030	-066	253	23.7	277	29.7																

52,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	3000	-562													567	27.2	575	28.4	583	29.6	598	31.6	615	33.8
100	2420	-365									421	18.8	430	20.1	439	21.2	448	22.4	465	24.9	485	27.3	501	29.9
110	2000	-250			315	11.8	323	13.6	333	14.7	343	16.0	354	17.3	363	18.5	381	20.8	398	23.3	415	26.0		
120	1680	-176	239	8.64	252	9.92	261	11.0	272	12.1	282	13.6	292	14.7	302	16.0	320	18.4	337	20.9	352	23.6		
130	1425	-127	195	6.94	209	8.26	226	9.40	231	10.5	240	12.0	251	13.3	260	14.4	277	16.9	294	19.7	307	22.5		
140	1232	-095	162	5.60	176	6.88	186	8.32	197	9.60	208	10.8	217	12.1	226	13.4	243	16.3	258	18.7	271	21.7		
150	1035	-067	138	5.00	152	6.25	162	7.25	173	8.75	182	9.75	191	11.2	200	12.5	216	15.5	230	18.2	243	21.2		
160	945	-056	120	4.36	133	5.60	144	7.04	154	8.48	163	9.76	172	10.8	180	12.1	195	15.0	208	18.2	221	21.2		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	3000	-562	648	39.2	679	44.0	709	49.2	735	54.0	764	60.0	789	65.2	813	70.8	835	76.0	858	81.6	880	86.4
100	2420	-365	517	32.4	547	37.7	577	42.4	602	48.0	627	53.6	651	58.8	674	64.8	694	70.4	715	76.0	736	81.2
110	2000	-250	430	28.8	458	33.9	487	39.4	510	44.8	534	50.4	556	56.0	576	62.8	597	68.4	615	74.4	635	79.6
120	1680	-176	366	26.5	393	31.6	419	37.6	442	43.2	464	49.2	484	55.2	504	62.0	523	68.0	540	74.4		
130	1425	-127	321	25.5	346	30.9	370	36.8	392	42.8	412	49.4										
140	1232	-095	285	24.8	308	30.5	330	36.9														
150	1035	-067	256	24.5	277	30.7																

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**H.S.**  
**FANS**

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**56,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	3215	·646																				
100	2608	·426																				
110	2165	·293																				
120	1808	·204	255	10·5	334	15·0	342	16·2	351	17·4	360	18·8	370	20·1	379	21·4	397	23·7	415	26·4	430	29·5
130	1540	·148	206	8·45	219	9·58	229	10·8	240	12·2	250	13·7	260	15·0	268	16·3	285	18·9	300	21·8	315	23·8
140	1325	·110	170	6·72	184	8·00	194	9·28	205	10·8	215	12·1	224	13·7	233	14·7	249	17·6	263	20·6	278	23·5
150	1160	·084	146	5·75	158	7·00	168	8·25	179	9·75	189	11·2	198	12·5	206	13·7	222	17·2	235	20·0	248	23·0
160	1018	·065	125	4·80	138	6·24	149	7·68	159	9·12	168	10·2	176	11·8	184	13·2	199	16·6	212	19·5	225	22·7

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH		3 3/4" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90	3215	·646	679	45·6	708	50·8	737	56·4	764	61·6	789	67·2	817	73·2	840	78·8	861	84·4	884	90·4	905	96·0
100	2608	·426	538	37·1	568	42·4	595	48·0	620	53·6	646	60·0	670	67·6	693	71·6	713	77·6	735	83·6	755	88·8
110	2165	·293	445	32·4	473	38·0	500	43·6	523	49·2	547	55·2	569	61·6	590	68·4	609	74·4	628	80·8	647	85·6
120	1808	·204	377	29·6	404	35·2	429	40·8	452	47·2	473	53·6	494	59·6	513	66·8	532	73·2	550	80·0	568	85·6
130	1540	·148	329	28·0	354	33·6	378	40·0	399	46·2	420	53·1	438	59·8								
140	1325	·110	290	27·0	313	33·1	337	39·6	357	46·0	375	52·8										
150	1160	·084	261	26·5	283	32·8	304	39·8														
160	1018	·065	236	26·7																		

**60,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	2798	·490																				
110	2315	·335																				
120	1940	·235			280	13·7	289	15·2	298	16·4	307	17·9	317	19·3	326	20·8	343	23·2	359	26·4	374	29·2
130	1650	·170	218	9·75	230	11·2	239	12·5	249	13·8	258	15·4	268	16·8	277	18·2	294	21·0	309	24·0	323	27·2
140	1420	·126	179	8·00	192	9·28	201	10·8	212	12·1	222	13·7	231	15·2	240	16·4	256	19·5	270	22·5	284	25·9
150	1240	·096	151	6·50	164	8·00	174	9·50	184	11·0	194	12·5	202	14·0	211	15·2	227	18·7	241	21·5	253	25·0
160	1087	·074	131	5·76	143	7·04	153	8·48	163	10·2	172	11·8	180	13·1	189	14·5	203	18·4	216	20·9	229	24·4
170	965	·058	115	5·12	127	6·74	137	8·35	147	9·63	155	10·9	163	12·5	171	14·1	185	18·0	197	21·5		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH		3 3/4" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	2798	·490	558	41·6	587	47·6	615	53·6	640	59·6	664	66·0	688	72·0	710	78·4	730	84·8	752	91·2	772	96·8
110	2315	·335	458	35·9	487	41·6	514	47·6	536	53·6	559	60·4	581	66·4	603	73·6	620	80·0	641	86·8	660	92·4
120	1940	·235	388	32·8	415	38·7	440	44·8	462	51·2	484	58·0	504	64·4	523	72·0	542	78·8	560	85·6	577	92·0
130	1650	·170	336	30·4	361	36·6	385	43·1	406	49·7	426	57·2	445	63·8	464	71·6	481	78·8				
140	1420	·126	297	29·4	320	35·6	342	42·4	363	48·8	382	56·8	399	64·4								
150	1240	·096	265	28·7	287	35·2	308	42·5														
160	1087	·074	240	28·4	261	35·5																

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**H.S.**  
**FANS**

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**64,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	2980	·557													507	34·5	521	36·0	534	38·5	551	41·2	567	44·0
110	2470	·382											388	23·6	396	25·2	404	26·8	412	28·2	430	31·2	445	34·0
120	2060	·265			295	16·1	303	17·4	312	18·8	320	20·4	330	21·9	338	23·5	355	26·2	370	29·4	385	32·6	395	35·0
130	1760	·194	231	11·6	242	13·1	250	14·4	260	15·9	268	17·6	278	19·1	287	20·4	303	23·4	318	26·6	332	30·0	342	32·0
140	1515	·144	188	9·28	201	11·5	210	12·1	221	13·7	229	15·3	239	16·9	247	18·4	263	21·2	277	24·8	291	28·3	301	30·0
150	1320	·109	158	7·75	170	9·25	180	10·7	190	12·0	200	14·0	208	15·5	217	16·7	232	20·2	246	23·5	259	27·0	270	29·0
160	1162	·084	136	6·40	148	8·00	158	9·60	168	11·3	176	12·8	185	14·4	194	15·8	207	19·3	220	22·7	233	26·4	244	29·0
170	1030	·067	119	5·78	131	7·40	141	9·00	150	10·6	159	11·8	167	13·5	174	15·4	188	19·2	201	22·4	212	26·3	223	29·0

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	2980	·557	580	47·6	609	53·6	635	60·0	660	66·4	683	72·8	707	79·2	730	85·6	749	92·8	769	99·2	790	105·6
110	2470	·382	474	40·0	501	46·4	529	52·8	551	59·2	574	66·4	595	73·2	616	80·8	635	87·2	653	94·0	674	100·4
120	2060	·265	399	36·0	425	42·4	450	48·8	472	55·6	494	62·4	514	69·6	531	77·6	551	84·4	569	92·0	587	98·4
130	1760	·194	345	33·3	370	39·7	393	46·6	414	53·6	435	61·1	453	68·5	471	76·2	487	84·0	506	91·5	523	98·5
140	1515	·144	304	31·6	326	38·2	349	45·6	369	52·8	387	60·8	405	68·4	422	76·8	439	84·8				
150	1320	·109	271	30·8	291	37·8	313	45·2	332	52·8	350	60·8										
160	1162	·084	245	30·4	265	37·7	285	45·2	303	52·8												
170	1030	·067	223	30·5																		

**68,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	3170	·628													541	40·0	547	41·2	559	44·0	573	47·2	589	50·4
110	2620	·428											409	27·6	417	29·4	425	30·8	432	32·4	447	35·6	464	41·6
120	2200	·302			311	18·5	318	20·1	326	21·6	334	23·3	343	24·9	351	26·4	367	29·4	383	32·8	397	36·1	411	39·0
130	1870	·218	243	13·5	253	15·0	261	16·5	270	17·8	278	19·7	288	21·4	296	22·9	312	25·8	326	29·2	340	32·8	354	36·0
140	1615	·162	198	10·5	210	12·1	219	13·7	228	15·2	237	17·1	246	18·7	254	20·4	270	23·5	284	27·0	297	30·5	311	34·0
150	1405	·123	166	8·75	178	10·5	187	12·0	197	13·7	206	16·5	215	17·2	223	18·7	238	22·0	251	25·5	264	29·0	277	32·0
160	1232	·095	142	7·68	153	9·08	163	10·8	173	12·4	181	14·2	190	15·6	198	17·3	212	21·2	226	24·4	238	28·4	250	31·0
170	1095	·075	123	6·42	135	8·02	144	9·64	154	11·2	162	12·8	170	14·4	178	16·3	192	20·5	204	23·8	215	27·6	226	30·0

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	3170	·628	602	54·0	630	60·0	657	67·2	680	73·6	704	80·4	728	87·2	750	94·4	769	101·6	789	108·4		
110	2620	·428	491	45·2	519	52·0	541	58·4	565	65·2	589	72·8	609	78·4	631	87·2	649	94·4	669	101·2	687	108·0
120	2200	·302	410	39·6	437	46·4	461	53·6	482	60·0	505	67·6	524	74·8	543	83·2	561	90·4	579	97·6	599	104·8
130	1870	·218	353	36·4	378	43·1	402	50·3	422	57·5	442	65·5	461	72·6	479	81·6	497	89·1	512	97·0	529	104·1
140	1615	·162	310	34·2	332	41·2	355	48·8	375	56·0	394	64·0	410	72·0	427	80·8						
150	1405	·123	276	33·0	297	40·2	319	48·0	337	55·8	355	64·2										
160	1232	·095	249	32·6	269	40·0																
170	1095	·075	226	32·1	246	40·0																

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# CYCLONE

**H·S**  
FANS

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**72,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	3350	·700																				
110	2780	·482																				
120	2325	·337																				
130	1980	·245																				
140	1706	·181	209	12·3	219	13·7	227	15·6	286	17·2	295	19·3	253	20·8	262	22·4	277	25·7	291	29·2	304	33·1
150	1485	·137	172	10·0	183	11·7	193	13·5	203	15·0	211	16·7	219	18·5	228	20·0	241	23·5	254	27·2	267	31·0
160	1308	·106	146	8·48	159	10·2	167	11·8	177	13·9	186	15·6	194	17·2	202	19·0	216	22·7	229	26·4	241	30·0
170	1160	·084	128	7·38	139	9·00	149	10·5	158	12·5	166	14·4	174	16·0	182	17·6	196	22·1	207	25·6	219	29·5

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH		3 3/4" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100	3350	·700	627	61·6	653	68·0	678	74·8	702	81·6	724	89·2	747	96·4	770	104·0						
110	2780	·482	506	50·0	534	56·8	559	64·4	581	71·2	603	78·8	625	86·4	645	94·4	663	102·0	682	109·2	701	116·4
120	2325	·337	422	43·6	448	50·8	472	58·0	493	64·8	515	72·8	534	80·8	554	88·8	571	96·8	591	104·8	607	112·0
130	1980	·245	362	40·0	386	47·1	410	54·8	431	62·3	452	70·4	468	78·0	487	87·2	504	95·2	520	103·6	537	111·0
140	1706	·181	316	37·1	339	44·4	362	52·0	382	59·6	400	67·8	417	76·8	434	85·6	451	94·4	465	103·2		
150	1485	·137	288	35·0	309	42·5	328	50·7	346	58·0	363	67·5	379	76·5	395	85·8						
160	1308	·106	252	34·4	273	42·0	292	50·4														
170	1160	·084	230	34·0	249	42·1																

**76,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/8" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		2" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	2930	·532																				
120	2450	·375																				
130	2085	·271																				
140	1802	·204	219	14·0	228	15·8	235	17·6	244	19·3	252	21·2	261	23·0	269	24·9	284	28·3	298	32·0	311	35·8
150	1570	·153	181	11·5	192	13·2	201	15·0	210	16·7	218	18·7	227	20·7	235	22·5	249	26·2	262	30·0	274	33·7
160	1380	·119	153	9·60	165	11·3	173	13·1	183	15·0	191	16·9	199	19·0	207	20·8	221	24·4	234	28·3	246	32·6
170	1220	·092	132	8·35	144	10·2	153	11·8	162	13·8	170	15·7	178	17·6	186	19·2	199	23·8	211	27·3	222	31·5

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/8" RH		2 1/4" RH		2 1/2" RH		2 3/4" RH		3" RH		3 1/4" RH		3 1/2" RH		3 3/4" RH		4" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	2930	·532	524	56·0	549	62·8	574	70·4	597	77·6	618	85·6	640	92·6	659	101·6	676	109·6	696	117·6		
120	2450	·375	434	47·6	459	55·2	484	62·8	504	70·4	525	79·2	545	86·4	564	95·2	581	103·2	599	111·6	617	118·8
130	2085	·271	371	43·1	393	50·6	418	58·5	437	66·6	458	74·7	476	82·7	494	92·2	510	100·4	527	109·1	544	117·1
140	1802	·204	323	40·0	346	47·6	368	55·6	387	64·0	406	72·4	423	81·2	439	91·2	456	100·0	471	108·8	489	116·8
150	1570	·153	286	38·0	308	46·0	329	54·2	347	62·7	365	72·2	381	81·0	397	91·0						
160	1380	·119	257	36·9	277	44·8	297	53·2	315	62·0	331	72·0										
170	1220	·092	233	36·3																		

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# H.S. FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

80,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3085	·591															481	44·8	487	46·4	499	50·0	512	53·2
120	2590	·420									370	31·6	377	33·9	384	35·5	391	37·2	405	40·8	420	44·4	433	48·4
130	2200	·302			287	21·6	294	23·6	301	25·5	310	27·4	317	29·3	324	31·1	339	34·7	354	38·6	368	42·6	382	46·6
140	1898	·226			239	17·9	244	19·5	252	21·1	260	23·2	269	25·2	277	27·2	292	30·4	305	34·3	317	38·2	337	42·2
150	1650	·170	189	13·0	199	15·0	207	16·7	216	18·5	224	20·5	232	22·5	240	24·2	254	28·0	268	32·0	280	36·2	297	40·2
160	1455	·131	158	10·8	170	12·7	178	14·0	187	16·1	195	18·5	203	20·4	211	22·4	225	25·9	238	30·0	250	34·5	267	38·7
170	1290	·104	137	9·32	148	11·2	157	13·1	166	15·1	175	17·3	182	19·2	189	20·8	203	25·0	215	29·2	227	33·7	244	38·2

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3085	·591	539	61·6	565	68·8	586	76·8	609	84·4	630	92·8	653	100·8	675	109·2	690	117·2	709	125·6		
120	2590	·420	445	52·0	470	60·0	495	68·0	515	76·0	536	84·8	556	92·8	575	102·0	592	110·0	609	118·8	627	126·4
130	2200	·302	380	46·9	404	54·6	427	62·9	447	70·7	467	79·7	484	87·2	502	97·6	519	106·2	536	115·8	552	123·6
140	1898	·226	330	42·8	352	50·8	374	58·8	393	67·6	412	76·8	429	84·8	446	95·6	462	104·0	477	113·6	492	122·4
150	1650	·170	292	40·5	313	48·7	334	57·5	352	66·2	370	76·4										
160	1455	·131	261	39·1	281	47·2	300	56·8	316	65·2	335	75·2										
170	1290	·104	237	38·5	256	47·2	275	56·5														

84,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3250	·660															502	50·8	506	52·4	517	56·0	531	59·6
120	2715	·460									385	36·0	392	38·0	398	39·6	405	41·6	418	45·6	437	48·8	446	52·8
130	2310	·332			301	25·2	307	27·0	314	28·9	321	30·8	329	32·8	336	34·9	350	38·5	364	42·4	377	46·6	392	50·8
140	1992	·248	238	18·4	246	20·0	253	21·7	260	23·5	268	25·6	276	27·6	283	29·6	298	33·1	312	37·4	324	41·6	337	46·6
150	1740	·188	197	15·0	206	16·7	214	18·5	223	20·2	230	22·7	238	24·7	246	26·5	260	30·2	273	34·5	286	38·7	297	40·2
160	1522	·144	165	12·2	176	14·2	184	16·2	193	17·9	200	20·4	209	22·4	217	24·1	230	27·8	243	32·4	255	36·9	267	38·7
170	1350	·113	142	10·2	153	12·5	162	14·4	171	16·3	178	18·3	186	20·3	193	22·8	206	26·9	219	31·1	230	35·6	244	40·2

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3250	·660	556	68·4	580	76·0	603	84·4	625	92·0	646	100·4	669	109·2	688	118·0	705	126·4	723	135·2	742	143·2
120	2715	·460	458	57·2	482	65·2	506	73·6	526	82·4	547	91·2	567	99·6	585	108·8	602	117·6	620	126·4	637	134·4
130	2310	·332	389	51·0	412	59·4	435	67·8	455	76·1	474	85·4	493	94·4	511	103·8	527	113·5	544	122·5	560	131·0
140	1992	·248	336	46·4	359	54·4	381	63·6	399	72·4	418	81·6	435	90·8	452	99·6	467	110·4	482	120·0	498	129·2
150	1740	·188	297	43·7	318	52·0	339	61·2	357	70·0	375	80·0	391	89·5								
160	1522	·144	266	41·6	286	50·4	305	59·6	323	68·8	339	79·2										
170	1350	·113	241	40·8	260	49·8	278	59·4	295	69·0												

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**H.S.**  
**FANS**

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**88,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3400	.720														526	57.2	536	61.2	548	65.2	560	69.2	
120	2842	.505									407	42.4	413	44.0	419	46.4	431	50.4	445	53.6	459	57.6		
130	2420	.364					320	30.2	325	32.1	333	34.4	340	36.2	347	38.3	359	42.2	375	46.4	387	50.7		
140	2085	.271			256	22.4	262	24.3	270	26.2	277	28.6	285	30.4	292	32.6	306	36.4	320	40.8	332	45.6		
150	1820	.206			206	18.7	214	20.5	221	22.5	230	24.7	237	26.7	245	29.0	252	32.7	266	37.3	279	41.7		
160	1600	.160	172	13.6	182	15.2	190	17.6	199	19.5	206	21.6	214	24.1	223	26.0	235	30.4	247	34.7	260	39.2		
170	1415	.125	147	11.5	158	13.5	166	15.7	175	17.6	182	19.9	190	22.1	197	24.4	210	28.9	222	33.0	233	37.9		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110	3400	.720	574	74.4	597	82.0	619	90.4	640	98.4	661	107.2	684	116.4	705	125.2	720	134.0	739	142.8	757	151.6
120	2842	.505	470	62.4	495	70.8	517	79.6	537	88.0	558	97.6	578	106.4	597	116.4	613	125.2	630	134.4	647	142.8
130	2420	.364	399	55.2	422	63.8	446	72.7	464	81.7	483	91.2	502	100.6	520	110.3	535	119.8	552	129.2	568	137.8
140	2085	.271	343	50.0	367	58.4	388	68.0	406	77.2	425	86.4	442	96.0	460	107.2	475	116.4	490	126.8	505	136.0
150	1820	.206	291	46.5	303	55.2	324	64.7	345	74.2	362	84.3	380	94.2	396	105.2	412	115.7	427	126.0	441	135.0
160	1600	.160	270	44.0	290	52.8	310	63.2	327	72.8	343	83.6	358	93.6	373	105.2						
170	1415	.125	244	43.0	263	52.0	281	62.3	298	72.2	314	83.5	328	94.7								

**92,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	2975	.550										422	47.2	428	49.2	433	51.2	445	55.2	458	59.2	472	63.2	
130	2525	.400								336	35.6	342	37.7	349	39.8	356	41.8	369	46.1	383	50.3	395	54.4	
140	2180	.297			270	25.0	274	27.2	278	28.9	286	31.4	293	33.5	300	35.7	314	39.8	327	44.4	340	48.8		
150	1900	.225	214	18.8	222	20.8	228	22.8	236	24.8	244	27.0	251	29.2	259	31.5	272	35.2	285	40.0	297	44.5		
160	1680	.176	180	15.6	189	17.6	196	19.6	204	21.6	212	24.1	219	26.4	227	28.4	240	32.7	255	37.2	264	42.0		
170	1480	.137	152	12.8	162	15.1	170	17.3	179	19.2	187	21.5	194	24.1	201	26.0	214	30.4	226	35.3	237	40.1		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	2975	.550	483	68.0	507	76.8	529	86.4	549	94.8	569	104.8	589	114.4	607	124.0	623	133.6	641	143.2	657	152.0
130	2525	.400	407	59.1	431	68.5	453	77.4	472	86.7	491	96.8	510	106.0	527	116.2	542	126.0	558	136.0	575	144.7
140	2180	.297	351	53.6	373	62.8	395	72.8	413	81.6	431	91.6	448	101.6	465	112.4	481	122.4	495	133.2	510	140.8
150	1900	.225	308	50.0	328	58.8	350	68.5	368	78.5	385	88.9	401	98.9	417	110.4	431	121.0	446	131.2		
160	1680	.176	275	47.2	295	56.4	314	66.8	332	76.8	348	88.4	363	98.4	382	110.4						
170	1480	.137	248	45.3	265	54.9	286	65.5	302	75.5	317	87.4	332	99.0								

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# H.S. FANS

## CYCLONE

### H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

96,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

BAROMETRIC PRESSURE 30" Hg 75,000 CFM W.G.																							
Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
120	3100	·603												443	54·4	448	56·8	459	60·8	472	64·8	484	69·6
130	2640	·435							347	39·4	354	41·6	361	44·1	367	46·0	379	50·5	393	54·6	406	59·1	
140	2268	·325					280	29·6	287	31·8	293	34·2	301	36·4	308	38·5	322	42·8	335	47·2	347	52·0	
150	1985	·246			230	23·0	236	25·0	243	27·0	250	29·5	258	31·8	265	34·0	278	38·0	291	43·0	303	48·0	
160	1740	·190	185	16·9	193	19·2	200	21·1	208	23·6	216	25·9	223	28·1	231	30·0	243	34·5	254	39·0	267	44·0	
170	1550	·150	157	14·4	167	16·3	175	18·9	184	20·8	191	23·4	199	25·7	206	27·6	219	32·4	230	37·2	241	42·4	

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	3100	·603	495	74·4	519	83·2	540	92·8	560	102·4	580	112·0	600	122·0	618	132·0	635	141·6	652	151·6	669	160·0
130	2640	·435	416	64·0	439	73·1	461	82·6	480	92·8	500	102·9	518	112·1	535	123·1	551	132·5	566	143·0	583	152·1
140	2268	·325	357	57·2	380	66·0	402	76·4	420	85·6	438	96·4	455	106·4	472	117·6	487	128·4	500	139·2	516	148·8
150	1985	·246	314	53·2	335	62·7	355	73·0	373	83·0	392	93·7	406	103·7	422	116·2	437	126·7	451	138·0	466	148·0
160	1740	·190	278	49·6	298	61·2	317	69·8	335	80·0	351	91·2	366	102·4	380	114·0	395	126·0	408	136·4	422	147·6
170	1550	·150	252	47·8	270	57·8	289	68·7	306	79·0	321	91·0	335	102·8								

100,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1 1/2" RH		2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	3230	·651												460	60·4	464	62·4	474	66·4	486	71·2	493	76·0	
130	2750	·473							360	43·7	366	46·4	372	48·4	377	50·6	389	55·2	403	59·4	416	63·8		
140	2370	·350			286	30·8	291	33·0	297	35·1	304	37·7	310	40·0	317	42·0	330	46·8	343	51·2	355	56·4		
150	2075	·268			237	25·2	243	27·2	250	29·5	257	31·8	264	34·2	271	36·8	284	38·5	297	44·5	308	51·2		
160	1820	·206	198	19·8	205	21·2	211	23·0	219	25·0	226	28·1	233	30·4	240	32·7	253	36·0	265	42·0	276	47·2		
170	1610	·162	163	15·7	173	18·0	180	20·2	188	22·4	195	25·0	203	27·6	210	30·2	222	34·6	234	39·8	245	44·9		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2 1/2" RH		3" RH		3 1/2" RH		4" RH		4 1/2" RH		5" RH		5 1/2" RH		6" RH		6 1/2" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120	3230	·651	510	81·2	532	90·4	554	100·4	573	109·6	592	120·4	612	131·2	630	140·8	646	150·8	662	160·8	680	170·4
130	2750	·473	427	69·2	449	78·9	470	88·6	490	98·7	508	109·2	526	119·2	544	130·2	558	140·8	575	151·3	591	161·0
140	2370	·350	366	60·0	388	71·6	409	81·2	427	91·2	445	102·4	462	116·8	479	124·4	493	134·8	509	145·6	524	155·2
150	2075	·268	319	56·2	340	66·2	360	76·7	378	87·2	395	98·0	411	108·7	426	121·2	441	132·0	455	143·7	470	154·0
160	1820	·206	287	52·8	307	62·8	326	73·2	342	84·4	359	95·2	374	106·4	389	120·0	403	131·2	416	142·8	430	153·2
170	1610	·162	255	50·4	274	61·0	292	72·0	309	82·9	324	95·0	338	106·8								

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**H.S.**  
**FANS**

## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**108,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
130	2970	·552											390	55·5	395	58·0	401	60·3	411	64·7	423	69·4	435	74·3
140	2580	·416											315	42·0	321	44·4	327	46·8	333	49·2	345	54·4	359	59·2
150	2225	·311									258	32·8	264	35·0	271	37·7	278	40·2	284	42·8	298	47·5	309	52·5
160	1955	·240	207	23·2	213	25·5	219	27·5	226	30·6	233	32·6	240	35·5	247	38·0	259	42·0	271	48·0	282	52·8	282	52·8
170	1740	·190	174	19·2	182	21·5	189	23·8	196	26·0	203	29·2	211	31·8	217	34·0	229	38·9	241	44·4	252	49·8	252	49·8

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
130	2970	·552	446	80·0	468	90·2	488	101·2	506	111·0	525	123·0	544	134·0	560	145·6	576	156·5	592	167·9	608	178·0
140	2580	·416	380	69·6	402	80·0	423	91·2	440	102·0	458	113·6	475	124·4	491	136·4	505	147·6	521	159·2	535	168·8
150	2225	·311	331	63·7	352	74·0	372	85·5	389	96·2	406	108·2	422	120·0	438	132·5	452	144·2	466	156·7	480	167·5
160	1955	·240	293	58·8	313	69·6	332	80·8	348	92·4	365	104·8	380	116·0	394	130·4	408	141·6	422	154·4	435	166·6
170	1740	·190	262	56·2	281	66·8	299	78·6	315	90·0	331	102·8	345	114·9	358	128·5	372	141·1	385	154·0	397	166·0

**116,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1/4" RH		3/8" RH		1/2" RH		5/8" RH		3/4" RH		7/8" RH		1" RH		1 1/4" RH		1 1/2" RH		1 3/4" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
130	3190	·638												422	69·4	426	71·8	434	77·0	446	82·0	457	87·5
140	2750	·474							334	50·4	339	53·6	346	56·0	351	58·4	362	63·6	374	68·4	386	73·6	
150	2395	·360					275	39·3	280	41·8	286	45·0	292	47·5	299	50·0	311	55·5	323	61·0	334	66·5	
160	2110	·278			226	30·0	232	32·6	238	35·2	244	38·3	251	40·8	257	43·6	270	48·4	282	54·0	292	60·0	
170	1865	·218	186	23·1	193	25·6	200	28·2	206	30·5	213	33·7	220	36·6	226	38·8	238	44·3	250	50·0	260	56·1	

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
130	3190	·638	468	93·8	488	104·2	510	116·2	527	127·0	545	138·8	564	151·0	580	163·1	590	174·5	610	186·8	625	198·0
140	2750	·474	397	80·0	417	91·2	437	102·4	455	114·0	472	126·4	489	138·0	505	150·8	519	162·4	534	174·8	549	186·4
150	2395	·360	344	72·2	364	84·0	384	95·2	401	107·0	417	120·0	434	132·0	449	145·5	462	157·7	476	170·7	490	181·7
160	2110	·278	302	66·4	322	78·0	341	89·6	357	102·0	373	114·8	389	126·8	403	140·8	416	153·6	430	167·6	444	178·8
170	1865	·218	270	62·2	289	73·9	307	86·0	323	98·5	338	112·0	352	124·0	366	139·5	379	152·5	392	166·0	405	178·5

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**H·S**  
FANS

**CYCLONE**

**H.S. CURVED BACK FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**128,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
140	3050	·581															375	70·8	379	74·4	391	78·8	400	84·8	410	91·2
150	2645	·437											302	53·2	308	56·2	313	58·8	318	61·6	330	67·4	342	73·1	352	79·7
160	2325	·338									250	40·8	255	44·0	261	47·2	267	49·6	273	52·8	284	55·6	296	64·4	307	70·8
170	2055	·264			208	32·4	216	34·7	220	37·4	227	40·7	233	43·9	239	46·9	251	52·0	262	58·8	273	65·0				

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
140	3050	·581	420	98·4	440	110·0	460	122·8	477	134·8	493	148·8	510	161·6	526	174·4	540	187·2	555	201·6		
150	2645	·437	362	85·8	382	98·5	404	111·0	417	124·0	434	138·0	450	150·2	465	165·0	478	175·8	492	192·5	506	203·0
160	2325	·338	316	77·2	336	90·0	355	102·8	370	115·6	388	129·6	410	142·8	415	158·0	428	171·2	441	185·6	455	198·4
170	2055	·264	282	72·3	300	85·0	318	98·2	333	111·5	349	125·5	362	139·0	375	155·0	390	168·5	401	184·0	415	197·5

**144,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	2975	·554										339	74·5	344	77·6	349	81·0	356	86·5	369	92·6	378	99·5	
160	2620	·430								280	58·8	286	62·0	288	65·2	296	68·8	306	75·2	317	81·6	328	88·0	
170	2320	·337						232	46·6	240	48·9	246	53·0	252	55·0	257	59·4	268	65·8	278	72·5	288	80·0	

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	2975	·554	388	108·0	402	120·4	425	134·8	441	148·5	462	164·0	474	178·0	486	194·0	500	208·5	514	225·5	526	237·5
160	2620	·430	337	96·0	355	109·2	373	123·2	388	138·8	404	151·6	419	168·0	433	184·0	446	198·4	459	214·4	472	228·8
170	2320	·337	297	87·0	316	102·0	334	116·0	348	130·2	367	146·2	376	161·5	392	178·0	403	193·6	415	210·0	428	223·0

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## H.S. CURVED BACK FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

160,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	3210	·640															375	100·0	380	103·2	386	110·0	396	117·5	405	125·0
160	2915	·530															315	83·2	319	86·4	328	92·8	339	99·6	348	107·2
170	2580	·416									261	63·4	266	67·7	271	70·9	276	74·3	286	82·2	296	89·0	306	96·8		

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150	3210	·640	415	133·2	430	148·0	449	163·5	465	178·0	478	195·6	494	211·0	510	227·5	523	243·5	536	260·0	550	275·5
160	2915	·530	357	115·6	375	130·4	392	146·4	407	160·0	422	179·2	437	195·2	450	212·8	463	228·8	477	246·4	489	260·8
170	2580	·416	314	105·0	332	121·0	350	136·0	363	153·0	378	170·0	392	186·5	405	204·0	417	221·5	428	237·5	441	255·0

176,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
160	3200	·640															342	104·8	345	108·8	353	116·4	362	124·0	371	131·6
170	2830	·500											287	85·0	291	86·8	295	92·9	304	102·0	314	107·8	323	116·0		

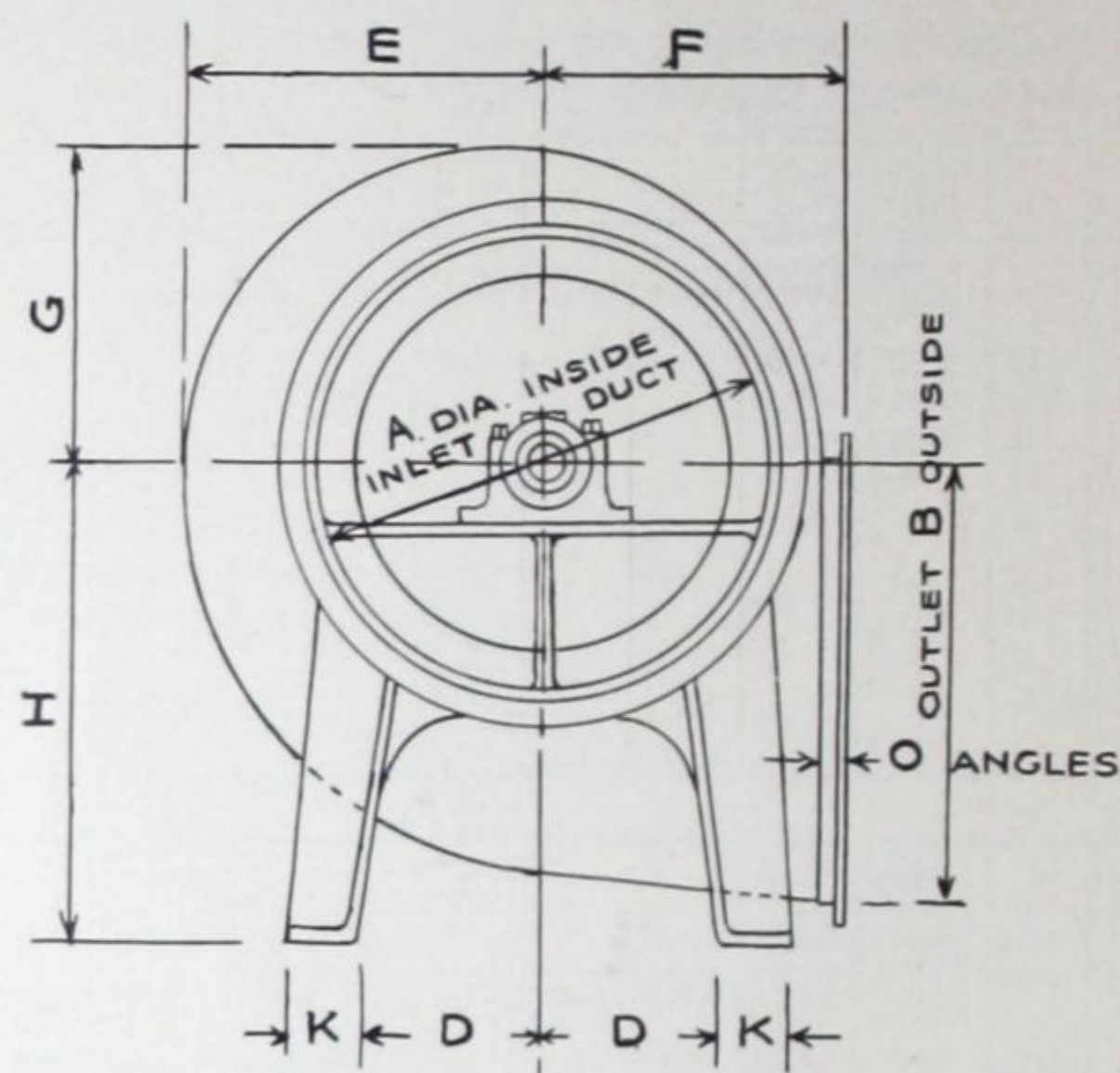
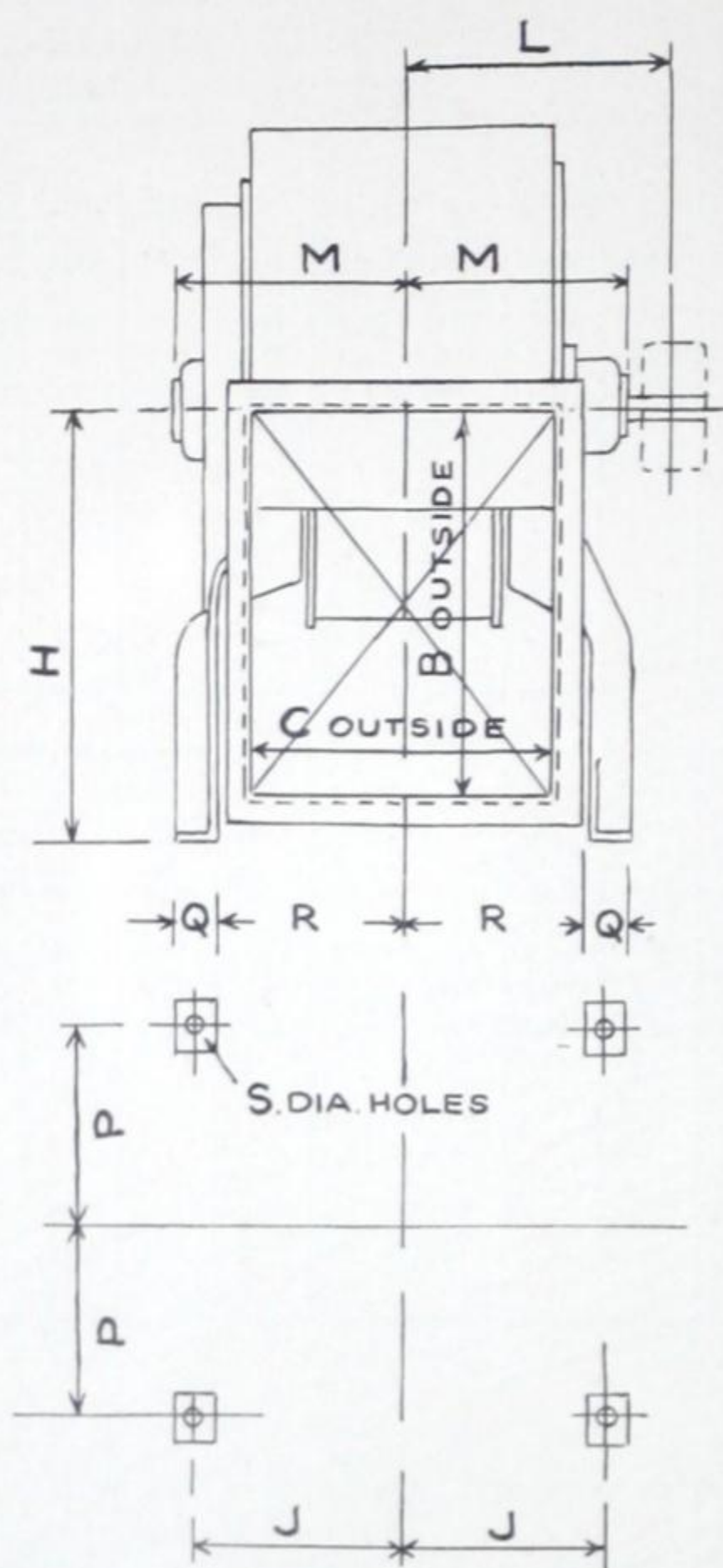
Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		5½" RH		6" RH		6½" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
160	3200	·640	380	141·2	397	158·0	413	176·0	427	192·0	442	209·6	457	228·8	470	246·4	483	264·0	495	281·6	508	299·2
170	2830	·500	332	125·8	349	142·0	364	159·3	380	176·3	394	196·5	407	213·0	421	232·5	432	250·0	444	267·0	457	286·0

For dimension sheets see pages 76 to 90.

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE



## ARRANGEMENT 1.

Standard Equipment supplied with Two Ring Oiling Bearings.

Ball Bearing Plummer Blocks can be fitted when required.

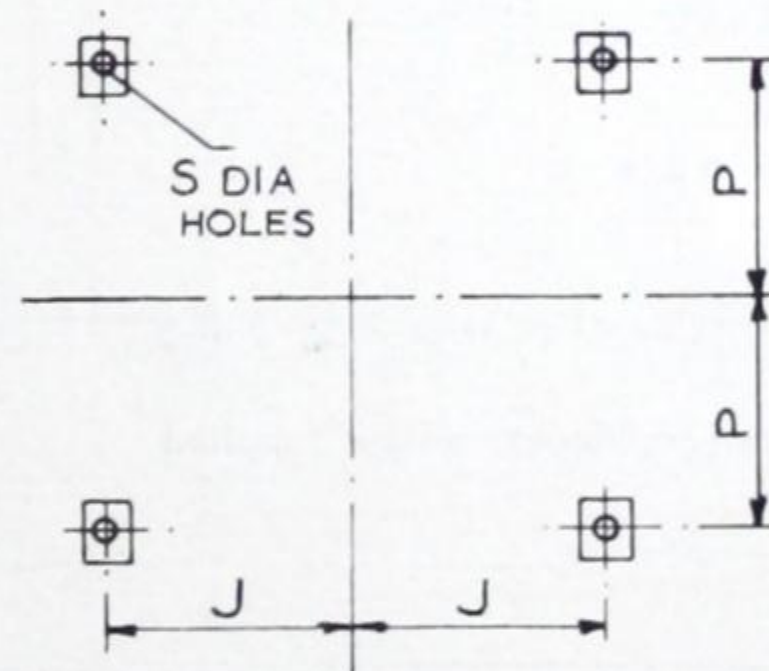
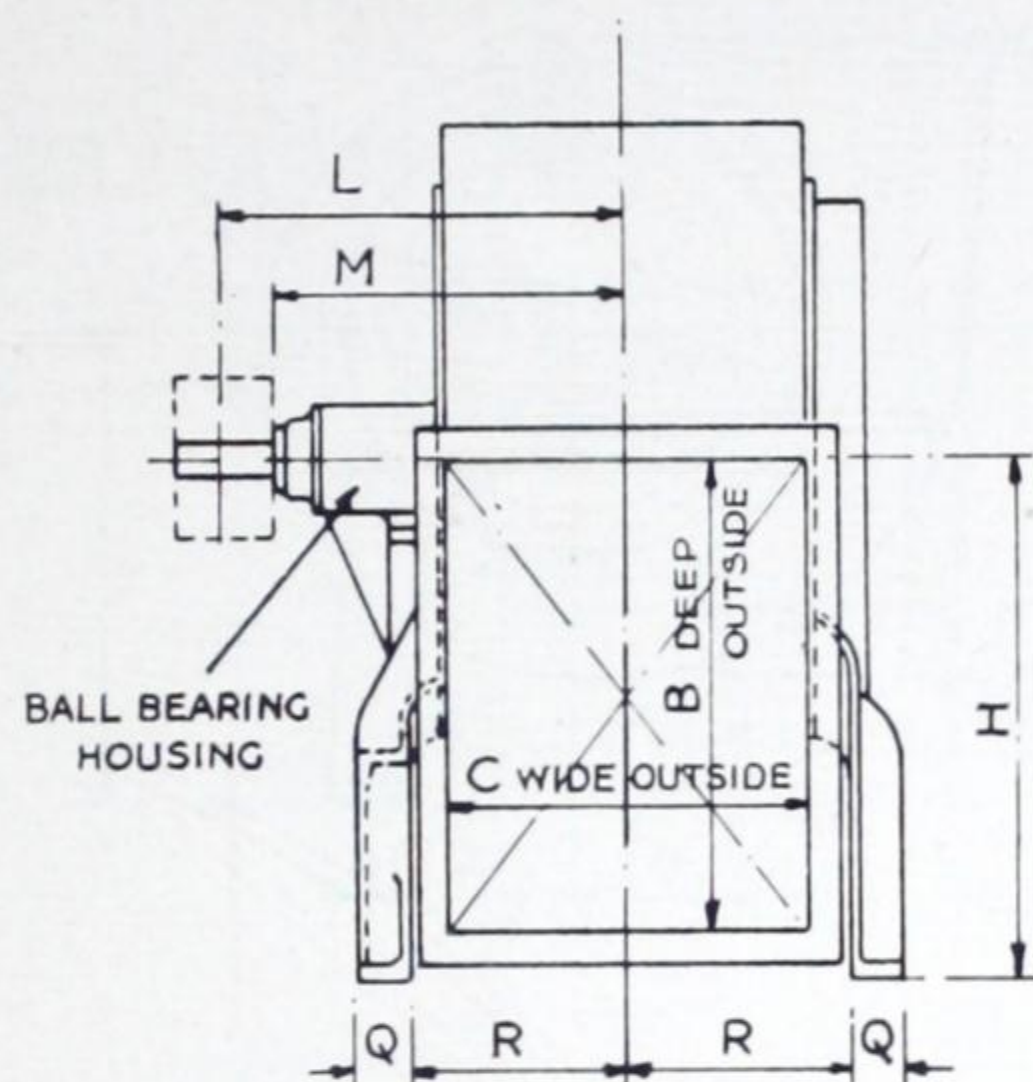
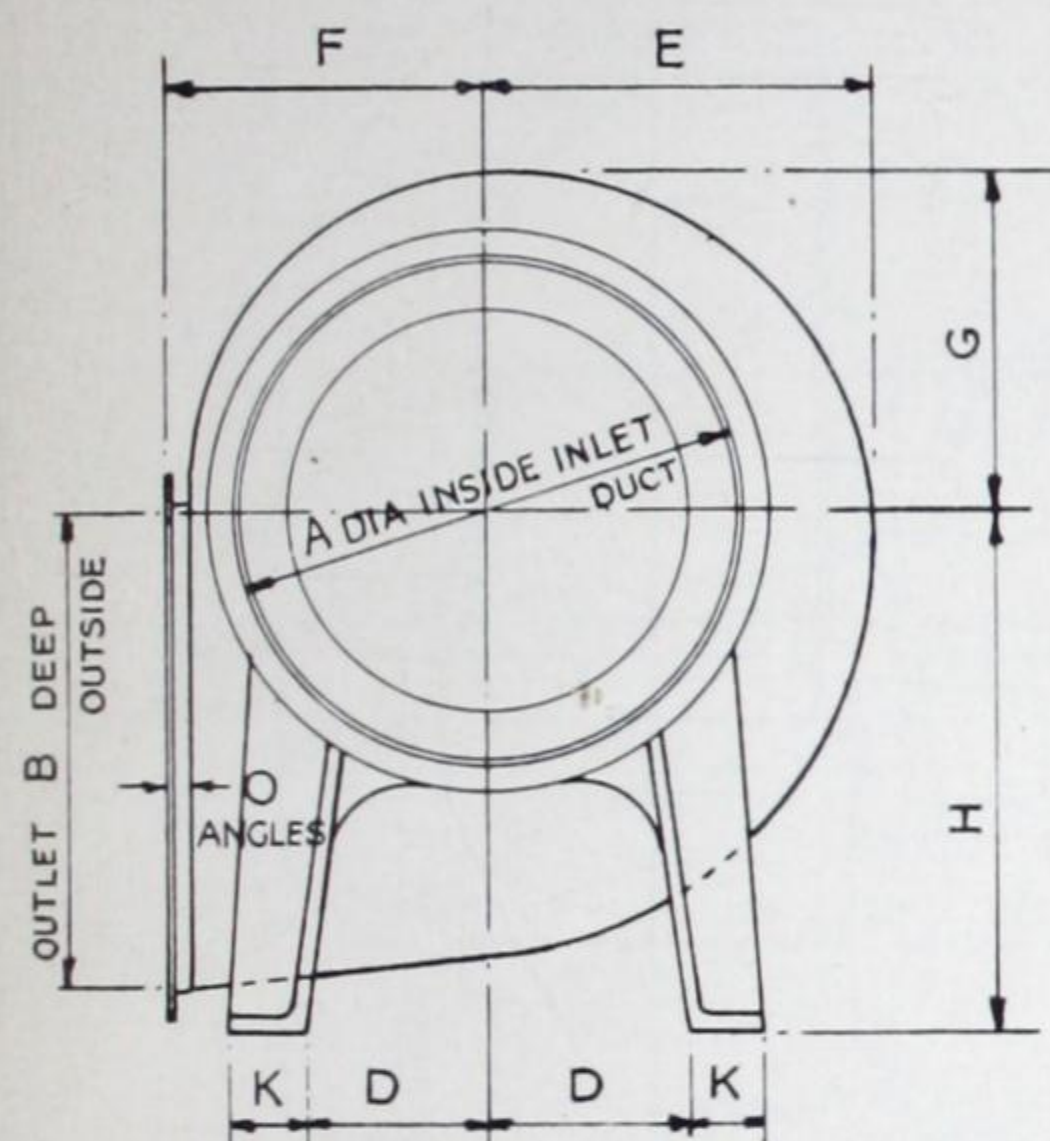
## DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

Fan Size	DIMENSIONS IN INCHES																	Pulleys S.S. Fans		Pulleys H.S.C.B. Fans	
	A	B	C	D	E	F	G	H	J	K	L	M	O	P	Q	R	S	Dia.	Wide	Dia.	Wide
20	13 $\frac{3}{4}$	12 $\frac{11}{16}$	9 $\frac{7}{8}$	5	10 $\frac{5}{16}$	8 $\frac{11}{16}$	9	14 $\frac{1}{4}$	7 $\frac{5}{16}$	2 $\frac{3}{4}$	10 $\frac{3}{16}$	9 $\frac{1}{16}$	1 $\frac{1}{4}$	6 $\frac{13}{16}$	1 $\frac{1}{2}$	6 $\frac{7}{16}$	$\frac{1}{2}$	6	4	4	3
25	17	15 $\frac{7}{8}$	12 $\frac{5}{16}$	6	12 $\frac{11}{16}$	10 $\frac{11}{16}$	11 $\frac{1}{4}$	17 $\frac{1}{8}$	8 $\frac{17}{32}$	3	11 $\frac{9}{16}$	9 $\frac{11}{16}$	1 $\frac{1}{4}$	8	1 $\frac{1}{2}$	7 $\frac{21}{32}$	$\frac{1}{2}$	7	4	5	3
30	20 $\frac{1}{2}$	19	14 $\frac{3}{4}$	7	15 $\frac{1}{2}$	12 $\frac{3}{4}$	13 $\frac{1}{2}$	20 $\frac{3}{4}$	10	3 $\frac{1}{2}$	12 $\frac{1}{2}$	10 $\frac{3}{4}$	1 $\frac{1}{4}$	9 $\frac{3}{8}$	2	8 $\frac{7}{8}$	$\frac{1}{2}$	8	4	6	4
35	24	22 $\frac{1}{8}$	17 $\frac{1}{8}$	8	18 $\frac{1}{16}$	14 $\frac{11}{16}$	15 $\frac{3}{4}$	24	11 $\frac{3}{16}$	3 $\frac{3}{4}$	13 $\frac{11}{16}$	12 $\frac{1}{16}$	1 $\frac{1}{4}$	10 $\frac{5}{8}$	2	10 $\frac{1}{16}$	$\frac{1}{2}$	10	4	7	4
40	27 $\frac{1}{2}$	25 $\frac{3}{8}$	19 $\frac{5}{8}$	9	20 $\frac{5}{8}$	16 $\frac{5}{8}$	18	27 $\frac{1}{4}$	12 $\frac{7}{16}$	4	14 $\frac{11}{16}$	12 $\frac{11}{16}$	1 $\frac{1}{4}$	11 $\frac{3}{4}$	2	11 $\frac{5}{16}$	$\frac{5}{8}$	14	5	10	5
45	30 $\frac{3}{4}$	28 $\frac{1}{2}$	22 $\frac{1}{16}$	10	23 $\frac{1}{4}$	18 $\frac{3}{4}$	20 $\frac{1}{4}$	31	14 $\frac{1}{4}$	4	15 $\frac{11}{16}$	13 $\frac{11}{16}$	1 $\frac{1}{2}$	12 $\frac{7}{8}$	2 $\frac{1}{2}$	12 $\frac{3}{4}$	$\frac{5}{8}$	16	5	11	5
50	34	31 $\frac{3}{4}$	24 $\frac{1}{2}$	11	25 $\frac{13}{16}$	20 $\frac{11}{16}$	22 $\frac{1}{2}$	34 $\frac{1}{4}$	15 $\frac{1}{2}$	4	16 $\frac{7}{8}$	14 $\frac{5}{8}$	1 $\frac{1}{2}$	14	2 $\frac{1}{2}$	14	$\frac{5}{8}$	18	5	12	5
55	37 $\frac{1}{2}$	34 $\frac{7}{8}$	27	12 $\frac{1}{4}$	28 $\frac{3}{8}$	22 $\frac{5}{8}$	24 $\frac{3}{4}$	37 $\frac{1}{2}$	16 $\frac{3}{4}$	4	19	16 $\frac{5}{8}$	1 $\frac{1}{2}$	15 $\frac{1}{4}$	2 $\frac{1}{2}$	15 $\frac{1}{4}$	$\frac{5}{8}$	20	6	14	6
60	41	38	29 $\frac{3}{8}$	13	31	24 $\frac{3}{4}$	27	40 $\frac{3}{4}$	18 $\frac{3}{16}$	4 $\frac{1}{2}$	19 $\frac{11}{16}$	17 $\frac{7}{16}$	1 $\frac{3}{4}$	16 $\frac{3}{8}$	2 $\frac{1}{2}$	16 $\frac{11}{16}$	$\frac{5}{8}$	22	6	16	6

MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE



## ARRANGEMENT 2.

Standard Equipment supplied with Double Ball Bearings fitted in Cast Iron Housing Bracket.

## DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

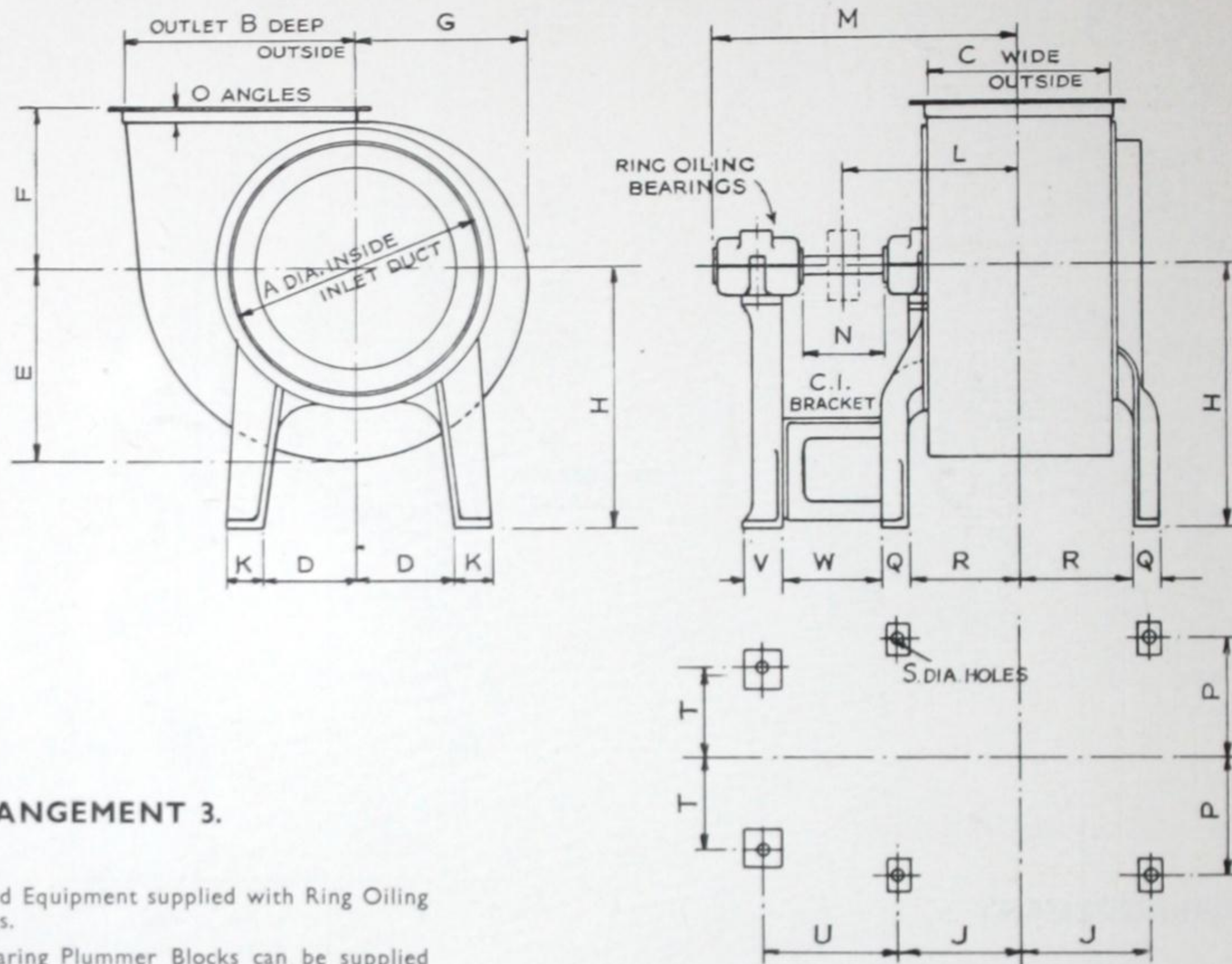
### DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	F	G	H	J	K	L	M	O	P	Q	R	S	Pulleys S.S. Fans		Pulleys H.S.C.B. Fans	
																		Dia.	Wide	Dia.	Wide
20	13 $\frac{3}{4}$	12 $\frac{11}{16}$	9 $\frac{7}{8}$	5	10 $\frac{5}{16}$	8 $\frac{15}{16}$	9	14 $\frac{1}{4}$	7 $\frac{5}{16}$	2 $\frac{3}{4}$	13 $\frac{7}{8}$	12 $\frac{3}{8}$	1 $\frac{1}{4}$	6 $\frac{13}{16}$	1 $\frac{1}{2}$	6 $\frac{7}{16}$	$\frac{1}{2}$	6	4	4	3
25	17	15 $\frac{7}{8}$	12 $\frac{5}{16}$	6	12 $\frac{15}{16}$	10 $\frac{13}{16}$	11 $\frac{1}{4}$	17 $\frac{5}{8}$	8 $\frac{17}{32}$	3	14 $\frac{11}{16}$	13 $\frac{3}{16}$	1 $\frac{1}{4}$	8	1 $\frac{1}{2}$	7 $\frac{21}{32}$	$\frac{1}{2}$	7	4	5	3
30	20 $\frac{1}{2}$	19	14 $\frac{3}{4}$	7	15 $\frac{1}{2}$	12 $\frac{3}{4}$	13 $\frac{1}{2}$	20 $\frac{3}{4}$	10	3 $\frac{1}{2}$	15 $\frac{13}{16}$	14 $\frac{1}{16}$	1 $\frac{1}{4}$	9 $\frac{3}{8}$	2	8 $\frac{7}{8}$	$\frac{1}{2}$	8	4	6	4
35	24	22 $\frac{1}{8}$	17 $\frac{1}{8}$	8	18 $\frac{1}{16}$	14 $\frac{11}{16}$	15 $\frac{3}{4}$	24	11 $\frac{3}{16}$	3 $\frac{3}{4}$	17 $\frac{1}{4}$	15 $\frac{3}{8}$	1 $\frac{1}{4}$	10 $\frac{5}{8}$	2	10 $\frac{1}{16}$	$\frac{1}{2}$	10	4	7	4
40	27 $\frac{1}{2}$	25 $\frac{3}{8}$	19 $\frac{5}{8}$	9	20 $\frac{5}{8}$	16 $\frac{5}{8}$	18	27 $\frac{1}{4}$	12 $\frac{7}{16}$	4	18 $\frac{1}{4}$	16 $\frac{1}{4}$	1 $\frac{1}{4}$	11 $\frac{3}{4}$	2	11 $\frac{5}{16}$	$\frac{5}{8}$	14	5	10	5
45	30 $\frac{3}{4}$	28 $\frac{1}{2}$	22 $\frac{1}{16}$	10	23 $\frac{1}{4}$	18 $\frac{3}{4}$	20 $\frac{1}{4}$	31	14 $\frac{1}{4}$	4	19 $\frac{1}{4}$	17 $\frac{1}{8}$	1 $\frac{1}{2}$	12 $\frac{7}{8}$	2 $\frac{1}{2}$	12 $\frac{3}{4}$	$\frac{5}{8}$	16	5	11	5
50	34	31 $\frac{3}{4}$	24 $\frac{1}{2}$	11	25 $\frac{13}{16}$	20 $\frac{11}{16}$	22 $\frac{1}{2}$	34 $\frac{1}{4}$	15 $\frac{1}{2}$	4	20 $\frac{3}{16}$	17 $\frac{15}{16}$	1 $\frac{1}{2}$	14	2 $\frac{1}{2}$	14	$\frac{5}{8}$	18	5	12	5

MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE



## ARRANGEMENT 3.

Standard Equipment supplied with Ring Oiling Bearings.

Ball Bearing Plummer Blocks can be supplied when required.

## DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

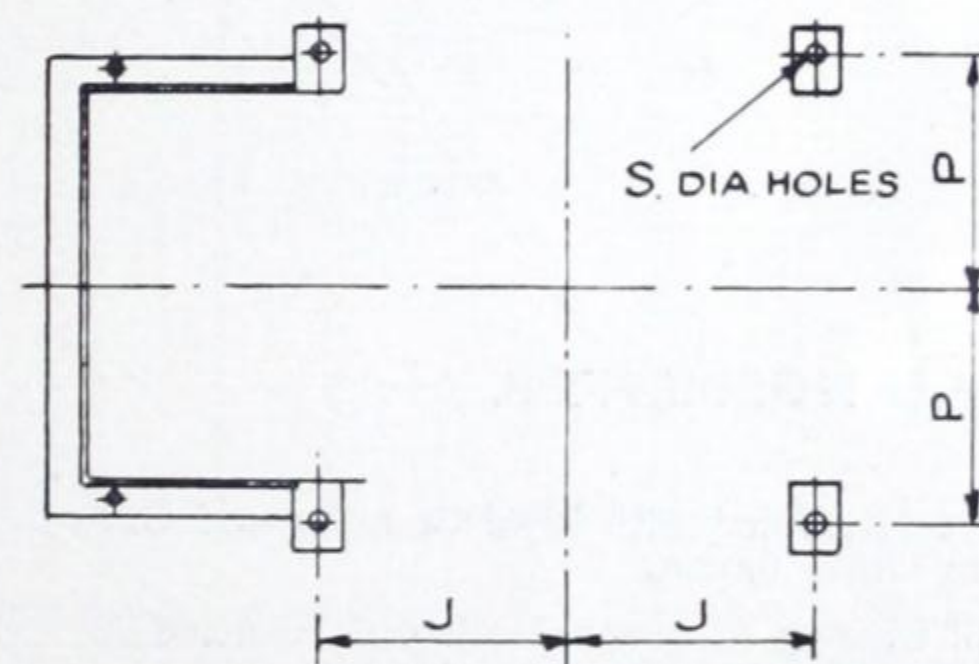
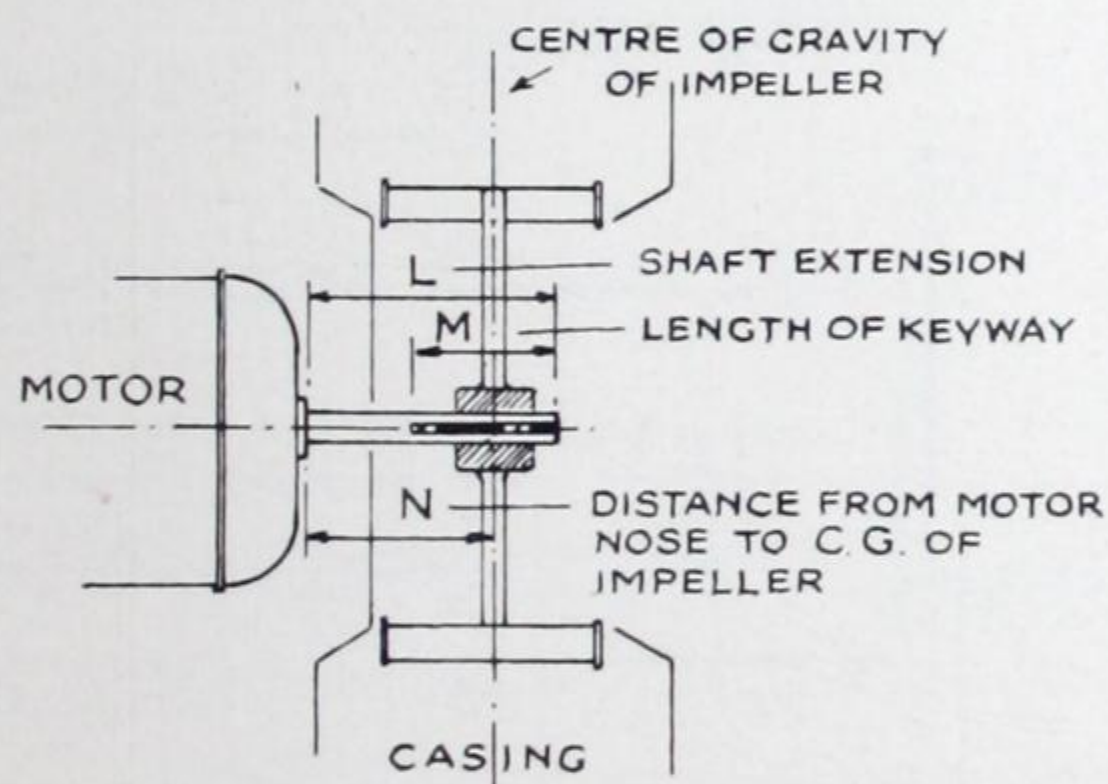
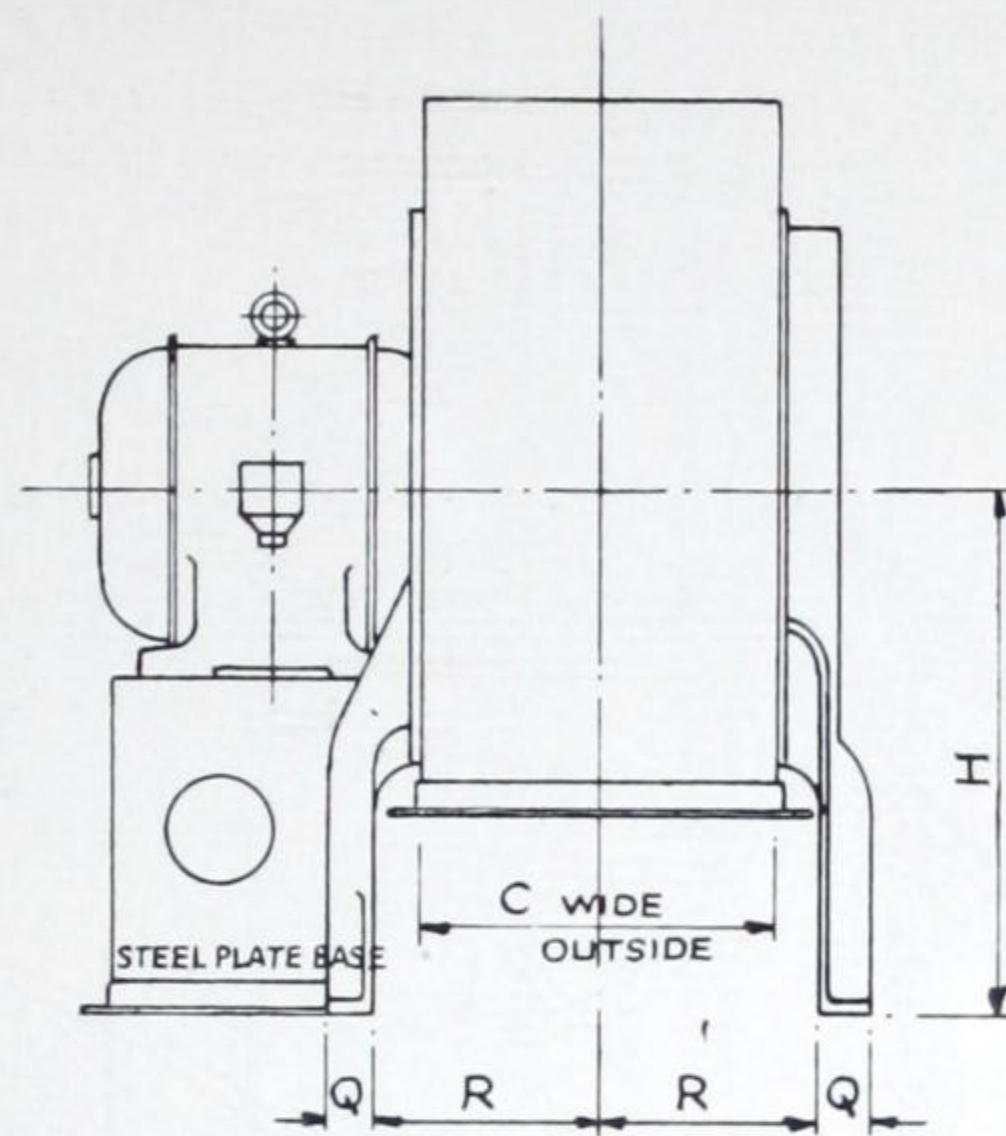
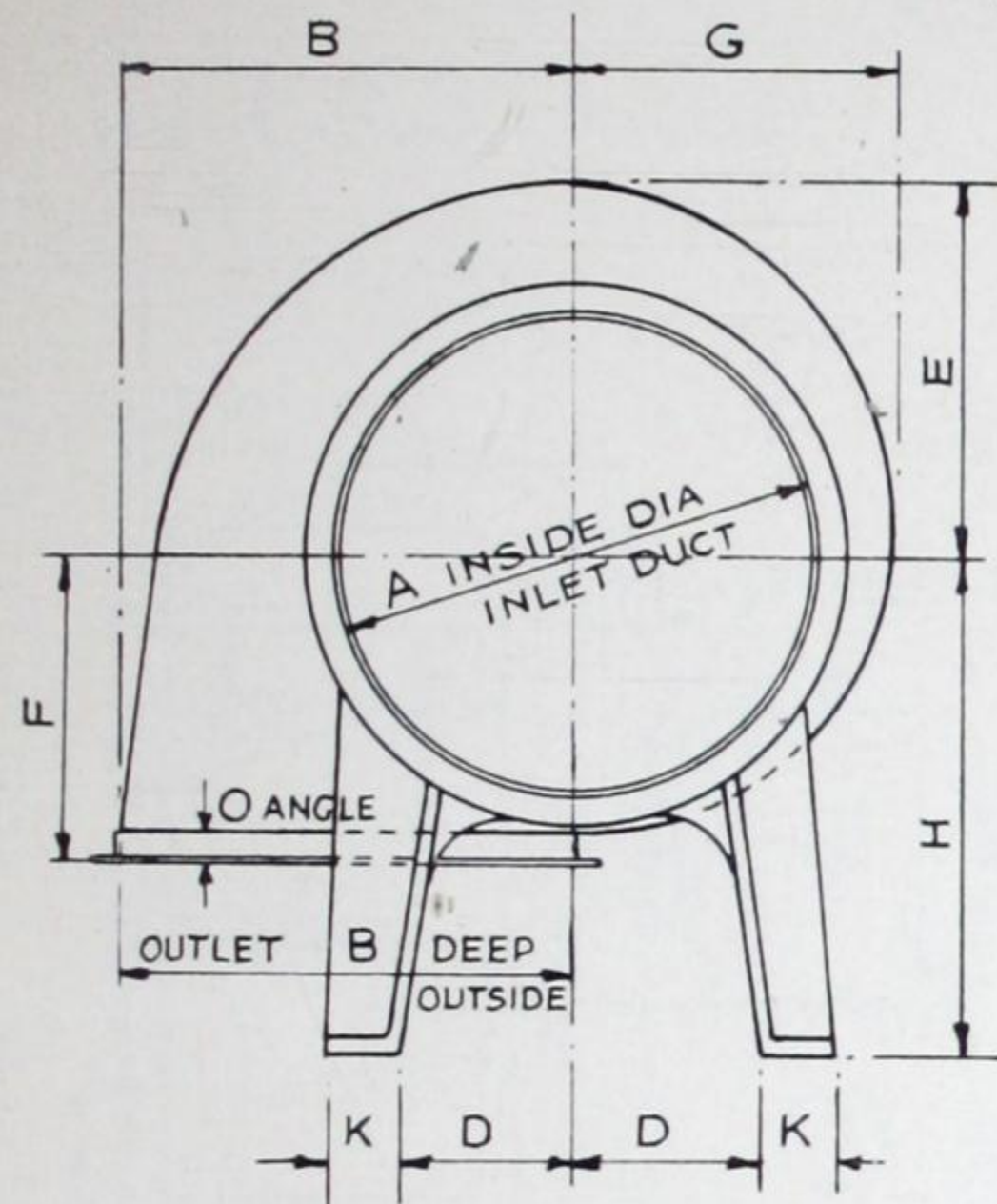
### DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Pulleys S.S. Fans		Pulleys H.S.C.B. Fans	
																							Dia.	Wide	Dia.	Wide
20	13 1/2	12 1/2	9 1/2	5	10 1/2	8 1/2	9	14 1/2	7 1/2	2 1/2	10 1/2	18 1/2	2	1 1/2	6 1/2	1 1/2	6 7/8	1 1/2	4 7/8	7 3/8	3 1/2	5	6	4	4	3
25	17	15 1/2	12 1/2	6	12 1/2	10 1/2	11 1/2	17 1/2	8 1/2	3	11 1/2	21	3 1/2	1 1/2	8	1 1/2	7 3/8	1 1/2	5 7/8	8 7/8	3 1/2	6 1/2	7	4	5	3
30	20 1/2	19	14 1/2	7	15 1/2	12 1/2	13 1/2	20 1/2	10	3 1/2	13 1/2	24	6	1 1/2	9 1/2	2	8 7/8	1 1/2	7 1/2	10 3/8	3 1/2	7 1/2	8	4	6	4
35	24	22 1/2	17 1/2	8	18 1/2	14 1/2	15 1/2	24	11 1/2	3 1/2	15 1/2	26 1/2	6 1/2	1 1/2	10 1/2	2	10 1/2	1 1/2	8 1/2	11 1/2	3 1/2	8 7/8	10	4	7	4
40	27 1/2	25 1/2	19 1/2	9	20 1/2	16 1/2	18	27 1/2	12 1/2	4	17	29 1/2	8 1/2	1 1/2	11 1/2	2	11 1/2	1 1/2	9 7/8	12 3/8	3 1/2	10 1/2	14	5	10	5
45	30 1/2	28 1/2	22 1/2	10	23 1/2	18 1/2	20 1/2	31	14 1/2	4	18 1/2	32 1/2	10 1/2	1 1/2	12 1/2	2 1/2	12 1/2	1 1/2	11 1/2	13 3/8	3 1/2	11 1/2	16	5	11	5
50	34	31 1/2	24 1/2	11	25 1/2	20 1/2	22 1/2	34 1/2	15 1/2	4	20 1/2	34 1/2	11 1/2	1 1/2	14	2 1/2	14	1 1/2	12 1/2	15 1/2	3 1/2	12 1/2	18	5	12	5
55	37 1/2	34 1/2	27	12 1/2	28 1/2	22 1/2	24 1/2	37 1/2	16 1/2	4	22 1/2	38 1/2	12 1/2	1 1/2	15 1/2	2 1/2	15 1/2	1 1/2	14 1/2	17	4 1/2	13 1/2	20	6	14	6
60	41	38	29 1/2	13	31	24 1/2	27	40 1/2	18 1/2	4 1/2	24 1/2	41 1/2	14 1/2	1 1/2	16 1/2	2 1/2	16 1/2	1 1/2	15 1/2	18 1/2	4 1/2	15 1/2	22	6	16	6

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# CYCLONE



## ARRANGEMENT 4.

Direct Coupled with Impeller mounted on Motor Shaft.

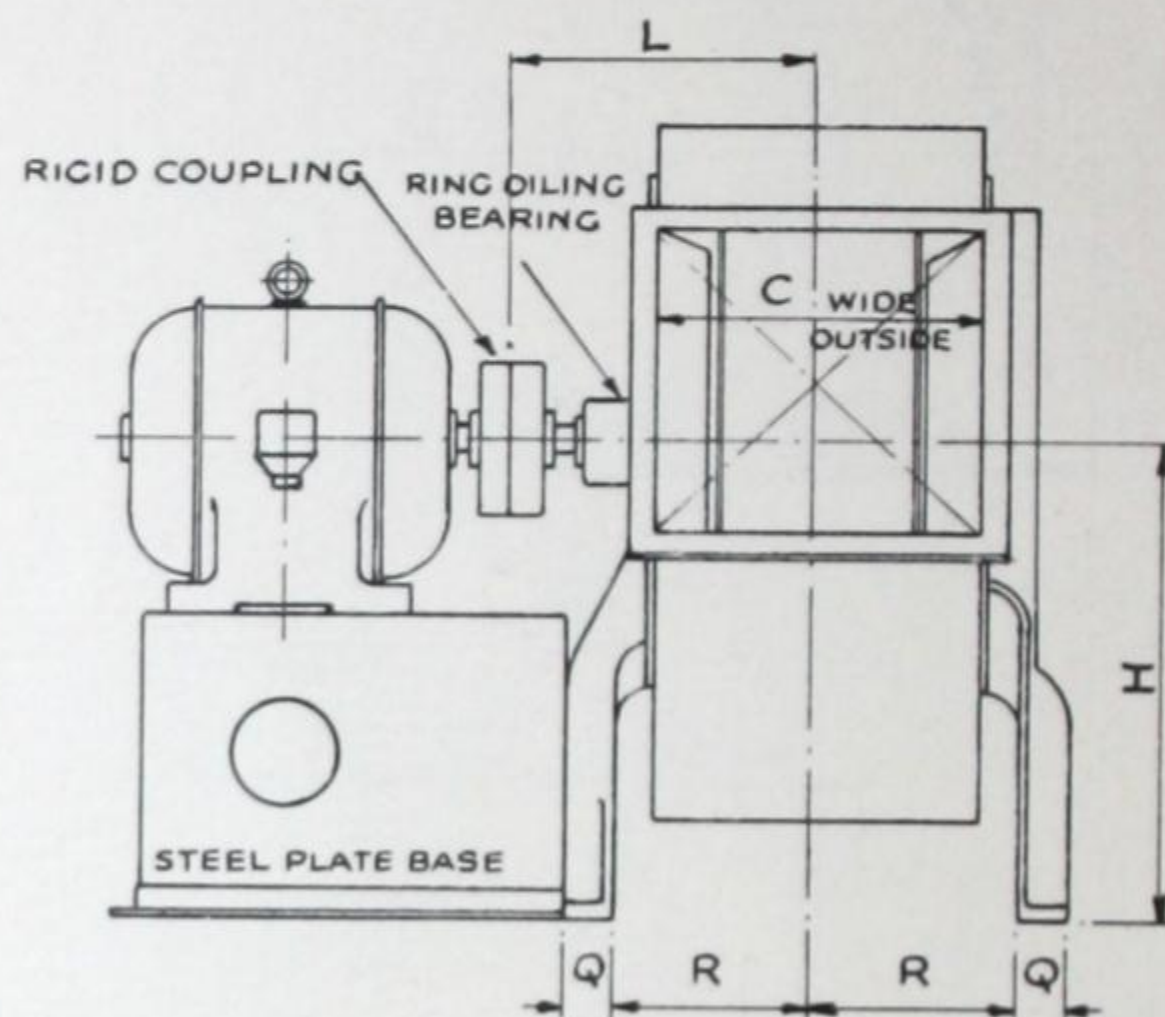
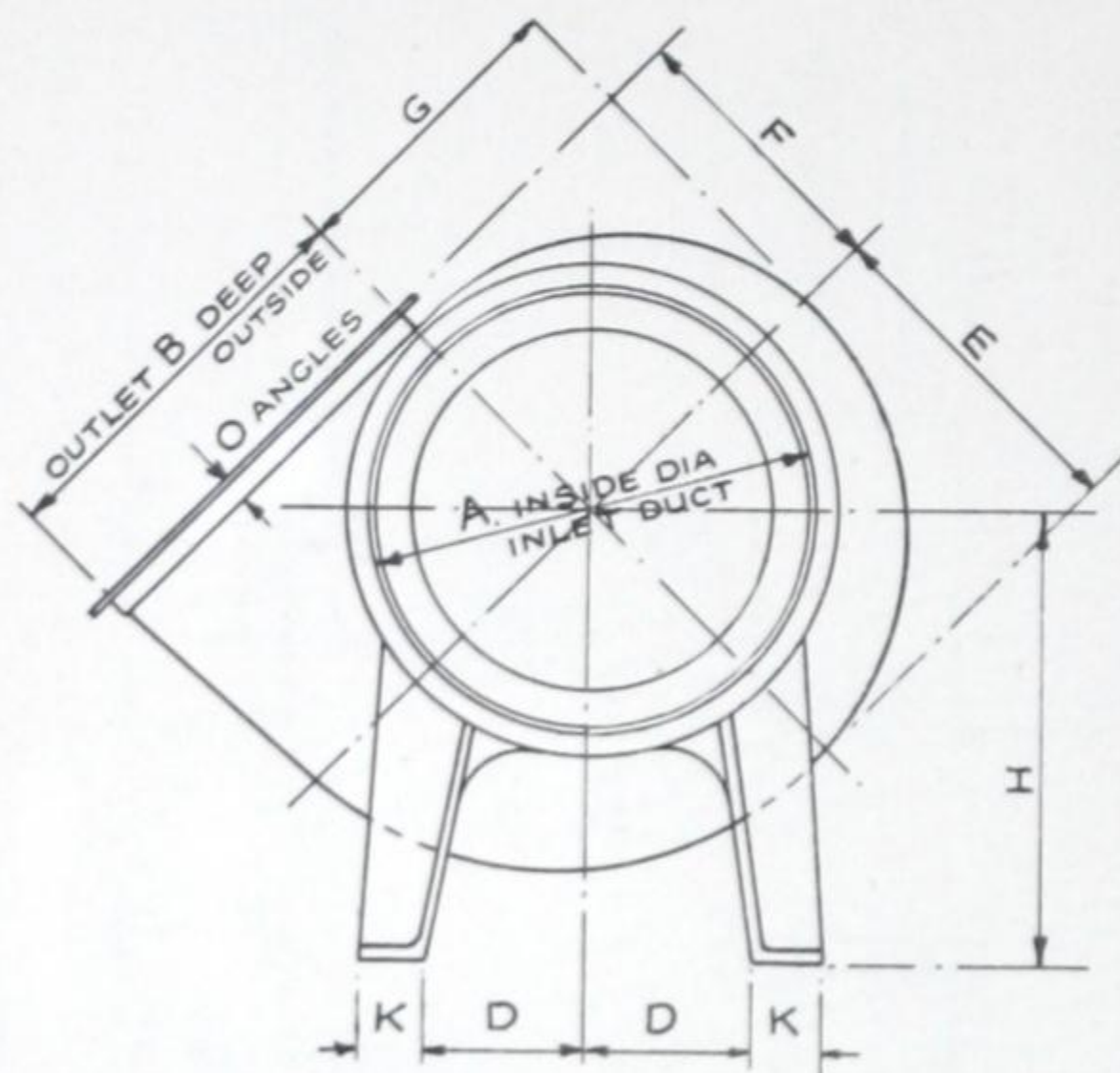
## DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

DIMENSIONS IN INCHES

Fan Size																			Impeller		Weights Lbs.	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	S.S. Fans	H.S.C.B. Fans		
20	13 $\frac{3}{4}$	12 $\frac{11}{16}$	9 $\frac{7}{8}$	5	10 $\frac{5}{16}$	8 $\frac{15}{16}$	9	14 $\frac{1}{4}$	7 $\frac{5}{16}$	2 $\frac{3}{4}$	7 $\frac{1}{4}$	5	5 $\frac{3}{16}$	1 $\frac{1}{4}$	6 $\frac{13}{16}$	1 $\frac{1}{2}$	6 $\frac{7}{16}$	$\frac{1}{2}$	15		24	
25	17	15 $\frac{7}{8}$	12 $\frac{5}{16}$	6	12 $\frac{15}{16}$	10 $\frac{13}{16}$	11 $\frac{1}{4}$	17 $\frac{5}{8}$	8 $\frac{17}{32}$	3	8 $\frac{1}{8}$	5 $\frac{3}{4}$	6 $\frac{3}{8}$	1 $\frac{1}{4}$	8	1 $\frac{1}{2}$	7 $\frac{21}{32}$	$\frac{1}{2}$	23		31	
30	20 $\frac{1}{2}$	19	14 $\frac{3}{4}$	7	15 $\frac{1}{2}$	12 $\frac{3}{4}$	13 $\frac{1}{2}$	20 $\frac{3}{4}$	10	3 $\frac{1}{2}$	10 $\frac{1}{4}$	7 $\frac{1}{2}$	7 $\frac{5}{8}$	1 $\frac{1}{4}$	9 $\frac{3}{8}$	2	8 $\frac{7}{8}$	$\frac{1}{2}$	31		48	
35	24	22 $\frac{1}{8}$	17 $\frac{1}{8}$	8	18 $\frac{1}{16}$	14 $\frac{11}{16}$	15 $\frac{3}{4}$	24	11 $\frac{3}{16}$	3 $\frac{3}{4}$	12	8	8 $\frac{3}{4}$	1 $\frac{1}{4}$	10 $\frac{5}{8}$	2	10 $\frac{1}{16}$	$\frac{1}{2}$	50		69	
40	27 $\frac{1}{2}$	25 $\frac{3}{8}$	19 $\frac{5}{8}$	9	20 $\frac{5}{8}$	16 $\frac{5}{8}$	18	27 $\frac{1}{4}$	12 $\frac{7}{16}$	4	13 $\frac{1}{2}$	9	10	1 $\frac{1}{4}$	11 $\frac{3}{4}$	2	11 $\frac{5}{16}$	$\frac{5}{8}$	69		82	
45	30 $\frac{3}{4}$	28 $\frac{1}{2}$	22 $\frac{1}{16}$	10	23 $\frac{1}{4}$	18 $\frac{3}{4}$	20 $\frac{1}{4}$	31	14 $\frac{1}{4}$	4	15	9 $\frac{1}{2}$	11 $\frac{1}{4}$	1 $\frac{1}{2}$	12 $\frac{7}{8}$	2 $\frac{1}{2}$	12 $\frac{3}{4}$	$\frac{5}{8}$	92		110	
50	34	31 $\frac{3}{4}$	24 $\frac{1}{2}$	11	25 $\frac{13}{16}$	20 $\frac{11}{16}$	22 $\frac{1}{2}$	34 $\frac{1}{4}$	15 $\frac{1}{2}$	4	16 $\frac{1}{4}$	10 $\frac{1}{2}$	12 $\frac{1}{2}$	1 $\frac{1}{2}$	14	2 $\frac{1}{2}$	14	$\frac{5}{8}$	121		131	
55	37 $\frac{1}{2}$	34 $\frac{7}{8}$	27	12 $\frac{1}{4}$	28 $\frac{3}{8}$	22 $\frac{5}{8}$	24 $\frac{3}{4}$	37 $\frac{1}{2}$	16 $\frac{3}{4}$	4	18 $\frac{1}{4}$	12	13 $\frac{3}{4}$	1 $\frac{1}{2}$	15 $\frac{1}{4}$	2 $\frac{1}{2}$	15 $\frac{1}{4}$	$\frac{5}{8}$	164		152	
60	41	38	29 $\frac{3}{8}$	13	31	24 $\frac{3}{4}$	27	40 $\frac{3}{4}$	18 $\frac{3}{16}$	4 $\frac{1}{2}$	19 $\frac{1}{2}$	13	15	1 $\frac{3}{4}$	16 $\frac{3}{8}$	2 $\frac{1}{2}$	16 $\frac{11}{16}$	$\frac{5}{8}$	224		194	



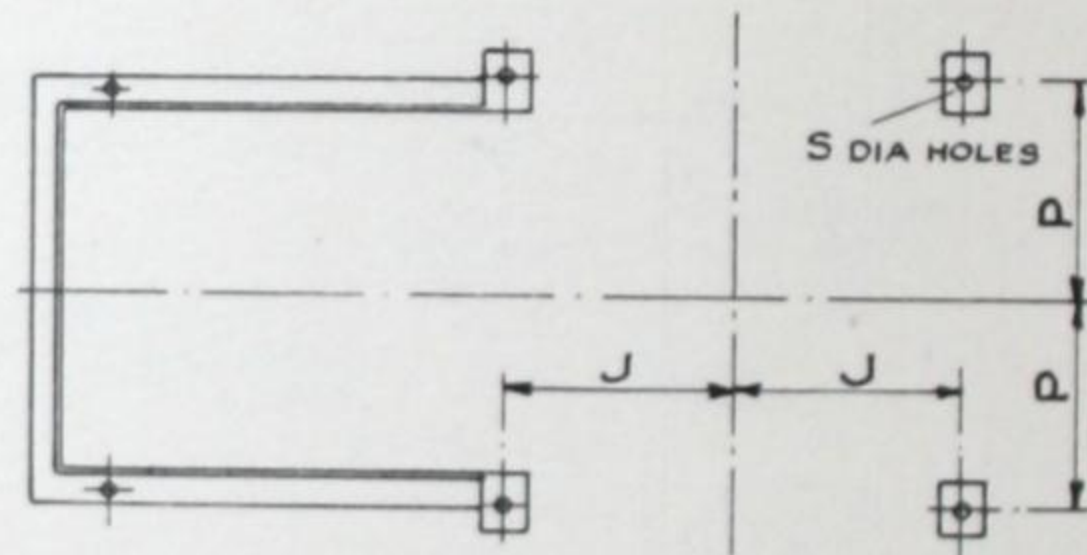
# CYCLONE



## ARRANGEMENT 5.

Direct Coupled with Rigid Coupling and One Ring Oiling Bearing.

Ball Bearing Plummer Block can be fitted in place of the Ring Oiling Bearing.



## DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

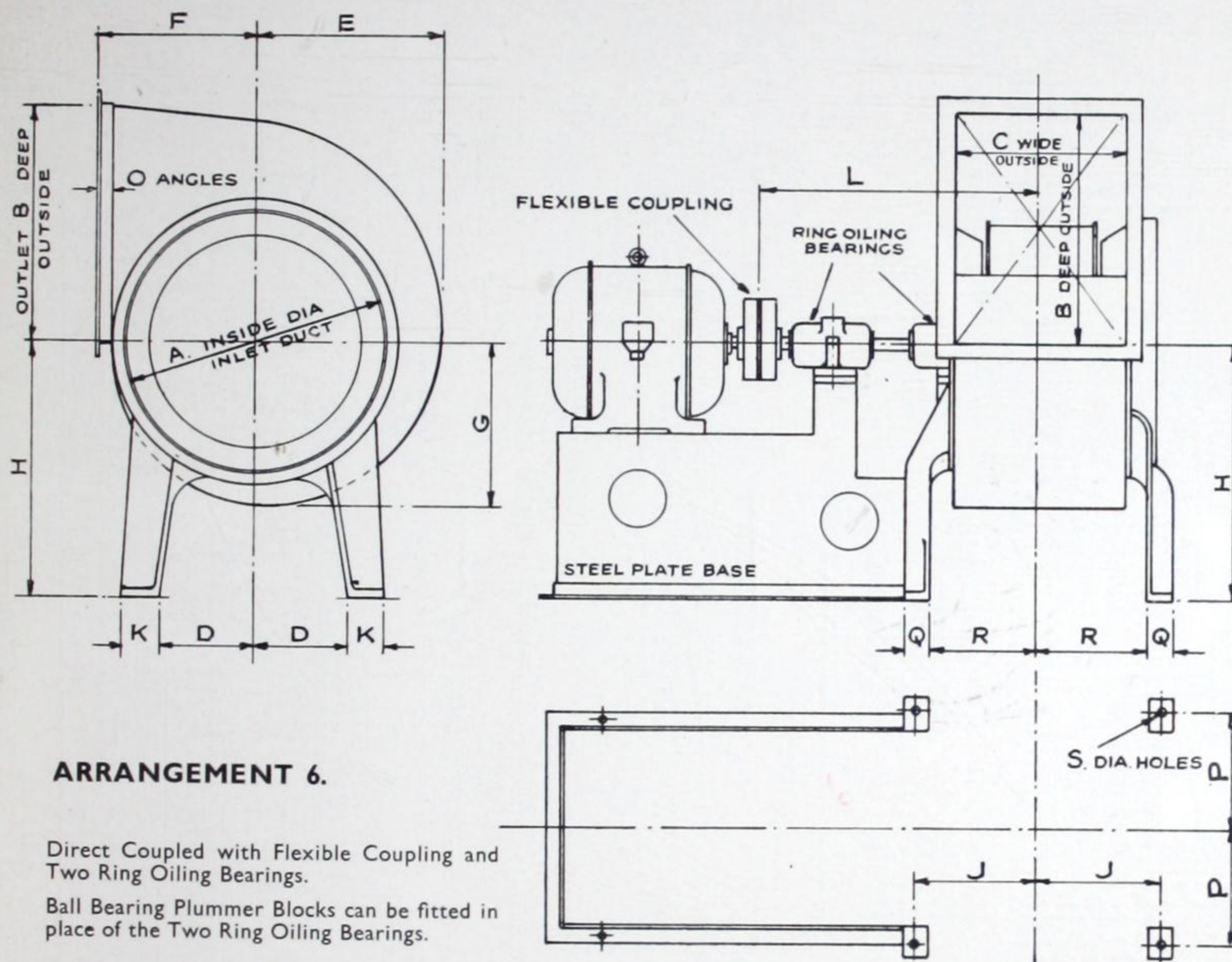
### DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	F	G	H	J	K	L	O	P	Q	R	S
20	13 $\frac{3}{4}$	12 $\frac{11}{16}$	9 $\frac{7}{8}$	5	10 $\frac{5}{16}$	8 $\frac{5}{16}$	9	14 $\frac{1}{2}$	7 $\frac{5}{16}$	2 $\frac{3}{4}$	12 $\frac{3}{16}$	1 $\frac{1}{4}$	6 $\frac{13}{16}$	1 $\frac{1}{2}$	6 $\frac{7}{16}$	$\frac{1}{2}$
25	17	15 $\frac{7}{8}$	12 $\frac{5}{16}$	6	12 $\frac{11}{16}$	10 $\frac{11}{16}$	11 $\frac{1}{4}$	17 $\frac{1}{2}$	8 $\frac{17}{32}$	3	13 $\frac{9}{32}$	1 $\frac{1}{4}$	8	1 $\frac{1}{2}$	7 $\frac{31}{32}$	$\frac{1}{2}$
30	20 $\frac{1}{2}$	19	14 $\frac{3}{4}$	7	15 $\frac{1}{2}$	12 $\frac{3}{4}$	13 $\frac{1}{2}$	20 $\frac{1}{2}$	10	3 $\frac{1}{2}$	14 $\frac{1}{8}$	1 $\frac{1}{4}$	9 $\frac{1}{8}$	2	8 $\frac{7}{8}$	$\frac{1}{2}$
35	24	22 $\frac{1}{2}$	17 $\frac{1}{8}$	8	18 $\frac{1}{16}$	14 $\frac{11}{16}$	15 $\frac{3}{4}$	24	11 $\frac{3}{16}$	3 $\frac{3}{4}$	15 $\frac{11}{16}$	1 $\frac{1}{4}$	10 $\frac{5}{8}$	2	10 $\frac{1}{16}$	$\frac{1}{2}$
40	27 $\frac{1}{2}$	25 $\frac{1}{2}$	19 $\frac{1}{8}$	9	20 $\frac{1}{8}$	16 $\frac{1}{8}$	18	27 $\frac{1}{4}$	12 $\frac{7}{16}$	4	16 $\frac{3}{16}$	1 $\frac{1}{4}$	11 $\frac{1}{2}$	2	11 $\frac{1}{16}$	$\frac{1}{8}$
45	30 $\frac{3}{4}$	28 $\frac{1}{2}$	22 $\frac{1}{16}$	10	23 $\frac{1}{4}$	18 $\frac{3}{4}$	20 $\frac{1}{2}$	31	14 $\frac{1}{4}$	4	17 $\frac{29}{32}$	1 $\frac{1}{2}$	12 $\frac{7}{8}$	2 $\frac{1}{2}$	12 $\frac{3}{4}$	$\frac{1}{8}$
50	34	31 $\frac{3}{4}$	24 $\frac{1}{2}$	11	25 $\frac{11}{16}$	20 $\frac{11}{16}$	22 $\frac{1}{2}$	34 $\frac{1}{2}$	15 $\frac{1}{2}$	4	19	1 $\frac{1}{2}$	14	2 $\frac{1}{2}$	14	$\frac{1}{8}$
55	37 $\frac{1}{2}$	34 $\frac{7}{8}$	27	12 $\frac{1}{4}$	28 $\frac{1}{8}$	22 $\frac{1}{2}$	24 $\frac{3}{4}$	37 $\frac{1}{2}$	16 $\frac{3}{4}$	4	21 $\frac{3}{4}$	1 $\frac{1}{2}$	15 $\frac{1}{2}$	2 $\frac{1}{2}$	15 $\frac{1}{4}$	$\frac{1}{8}$
60	41	38	29 $\frac{1}{8}$	13	31	24 $\frac{3}{4}$	27	40 $\frac{3}{4}$	18 $\frac{3}{16}$	4 $\frac{1}{2}$	22 $\frac{3}{16}$	1 $\frac{3}{4}$	16 $\frac{3}{8}$	2 $\frac{1}{2}$	16 $\frac{11}{16}$	$\frac{1}{8}$

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# CYCLONE



DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

DIMENSIONS IN INCHES

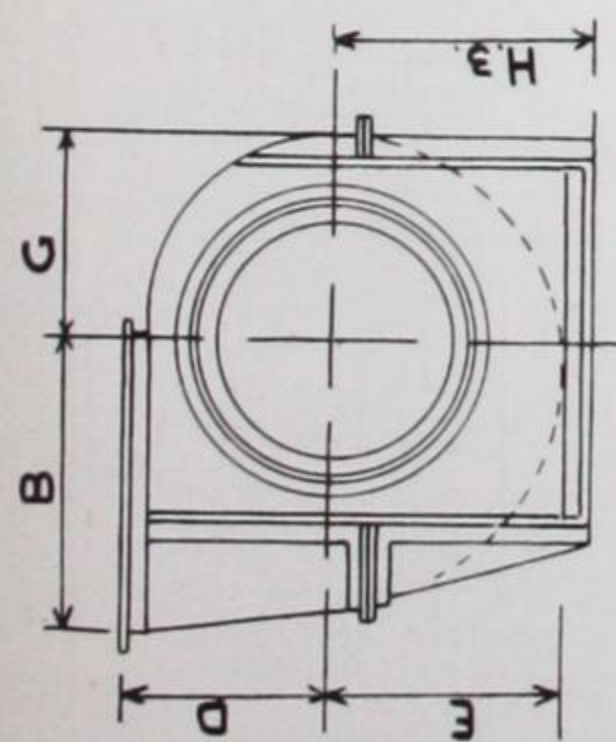
Fan Size	A	B	C	D	E	F	G	H	J	K	L	O	P	Q	R	S
20	13 $\frac{3}{4}$	12 $\frac{11}{16}$	9 $\frac{7}{8}$	5	10 $\frac{5}{16}$	8 $\frac{15}{16}$	9	14 $\frac{1}{4}$	7 $\frac{5}{16}$	2 $\frac{3}{4}$	21 $\frac{1}{2}$	1 $\frac{1}{4}$	6 $\frac{13}{16}$	1 $\frac{1}{2}$	6 $\frac{7}{16}$	$\frac{1}{2}$
25	17	15 $\frac{7}{8}$	12 $\frac{5}{16}$	6	12 $\frac{15}{16}$	10 $\frac{13}{16}$	11 $\frac{1}{4}$	17 $\frac{5}{8}$	8 $\frac{17}{32}$	3	22 $\frac{1}{2}$	1 $\frac{1}{4}$	8	1 $\frac{1}{2}$	7 $\frac{21}{32}$	$\frac{1}{2}$
30	20 $\frac{1}{2}$	19	14 $\frac{3}{4}$	7	15 $\frac{1}{2}$	12 $\frac{3}{4}$	13 $\frac{1}{2}$	20 $\frac{3}{4}$	10	3 $\frac{1}{2}$	23 $\frac{5}{8}$	1 $\frac{1}{4}$	9 $\frac{3}{8}$	2	8 $\frac{7}{8}$	$\frac{1}{2}$
35	24	22 $\frac{1}{8}$	17 $\frac{1}{8}$	8	18 $\frac{1}{16}$	14 $\frac{11}{16}$	15 $\frac{3}{4}$	24	11 $\frac{3}{16}$	3 $\frac{3}{4}$	26 $\frac{1}{2}$	1 $\frac{1}{4}$	10 $\frac{5}{8}$	2	10 $\frac{1}{16}$	$\frac{1}{2}$
40	27 $\frac{1}{2}$	25 $\frac{3}{8}$	19 $\frac{5}{8}$	9	20 $\frac{5}{8}$	16 $\frac{5}{8}$	18	27 $\frac{1}{4}$	12 $\frac{7}{16}$	4	27 $\frac{3}{4}$	1 $\frac{1}{4}$	11 $\frac{3}{4}$	2	11 $\frac{5}{16}$	$\frac{5}{8}$
45	30 $\frac{3}{4}$	28 $\frac{1}{2}$	22 $\frac{1}{16}$	10	23 $\frac{1}{4}$	18 $\frac{3}{4}$	20 $\frac{1}{4}$	31	14 $\frac{1}{4}$	4	28 $\frac{7}{8}$	1 $\frac{1}{2}$	12 $\frac{7}{8}$	2 $\frac{1}{2}$	12 $\frac{3}{4}$	$\frac{5}{8}$
50	34	31 $\frac{3}{4}$	24 $\frac{1}{2}$	11	25 $\frac{13}{16}$	20 $\frac{11}{16}$	22 $\frac{1}{2}$	34 $\frac{1}{4}$	15 $\frac{1}{2}$	4	30 $\frac{1}{4}$	1 $\frac{1}{2}$	14	2 $\frac{1}{2}$	14	$\frac{5}{8}$
55	37 $\frac{1}{2}$	34 $\frac{7}{8}$	27	12 $\frac{1}{4}$	28 $\frac{3}{8}$	22 $\frac{5}{8}$	24 $\frac{1}{4}$	37 $\frac{1}{2}$	16 $\frac{3}{4}$	4	35	1 $\frac{1}{2}$	15 $\frac{1}{4}$	2 $\frac{1}{2}$	15 $\frac{1}{4}$	$\frac{5}{8}$
60	41	38	29 $\frac{3}{8}$	13	31	24 $\frac{3}{4}$	27	40 $\frac{3}{4}$	18 $\frac{3}{16}$	4 $\frac{1}{2}$	35 $\frac{7}{8}$	1 $\frac{3}{4}$	16 $\frac{3}{8}$	2 $\frac{1}{2}$	16 $\frac{11}{16}$	$\frac{5}{8}$

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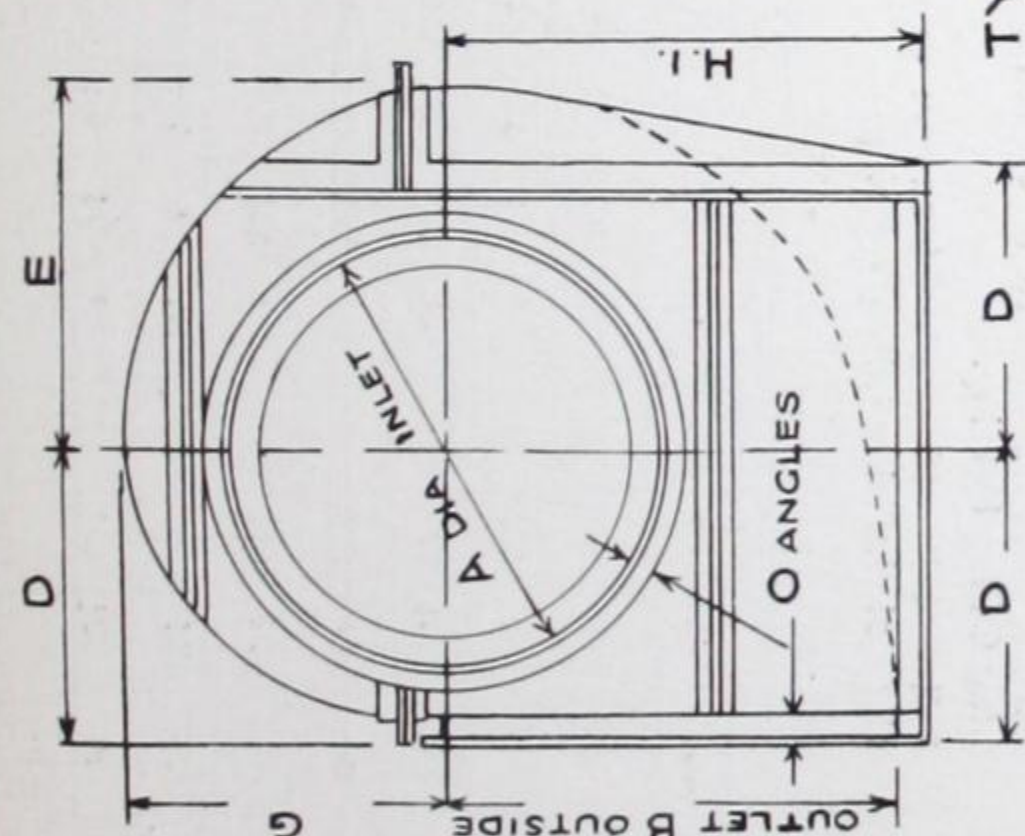




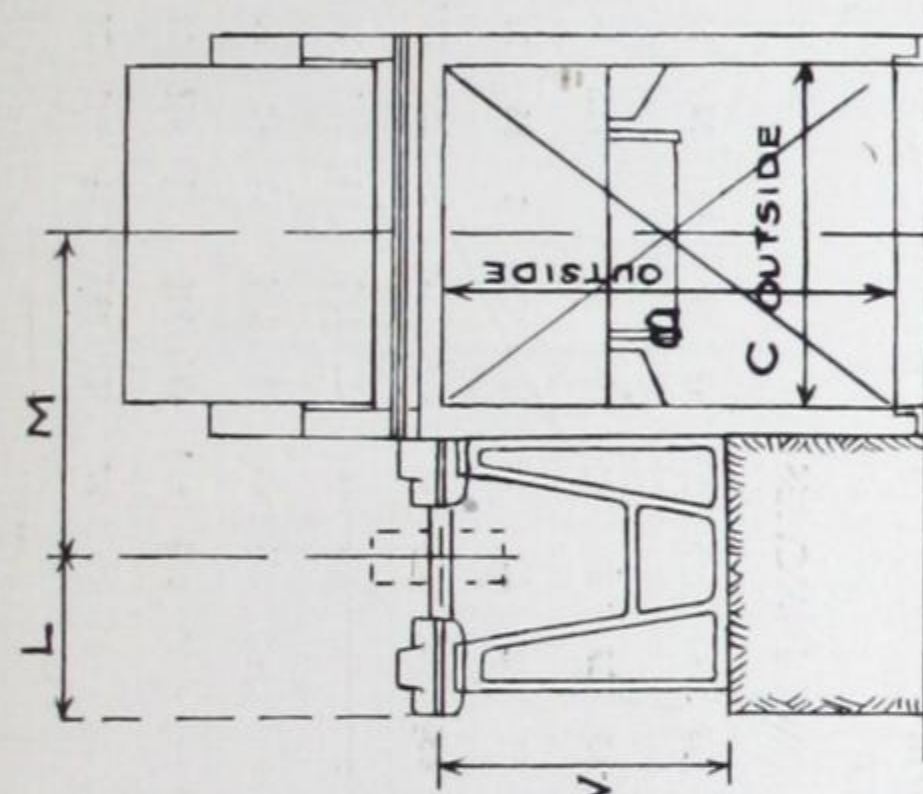




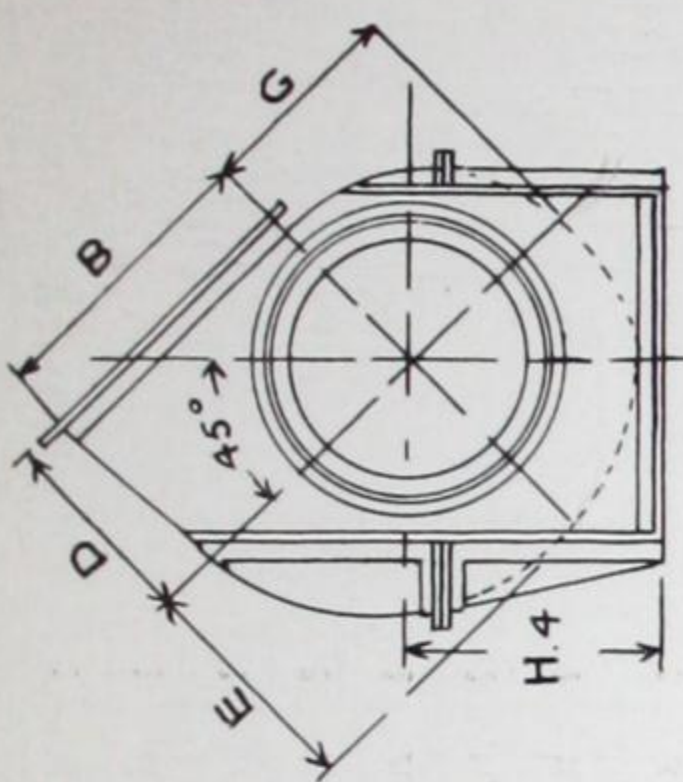
TYPE L.3.



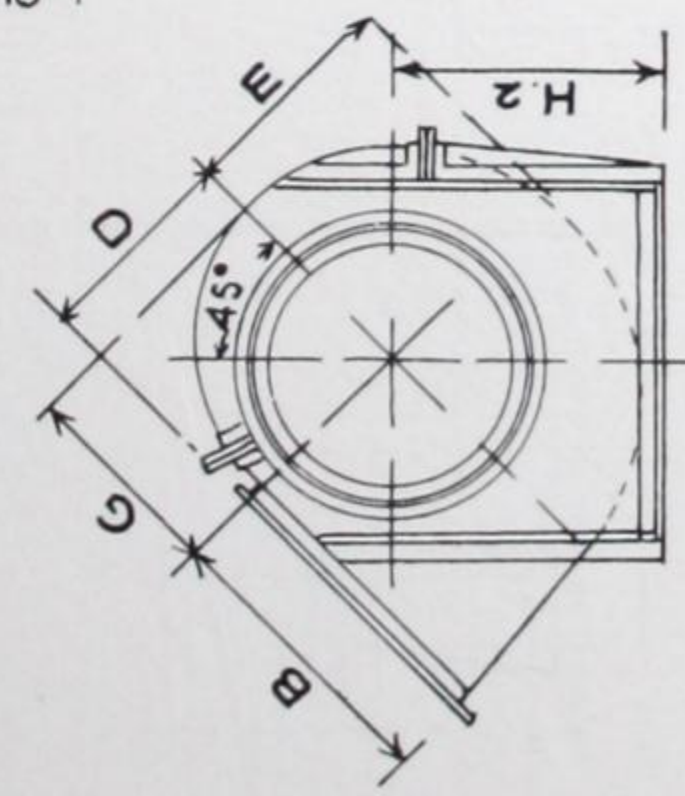
TYPE L.1.



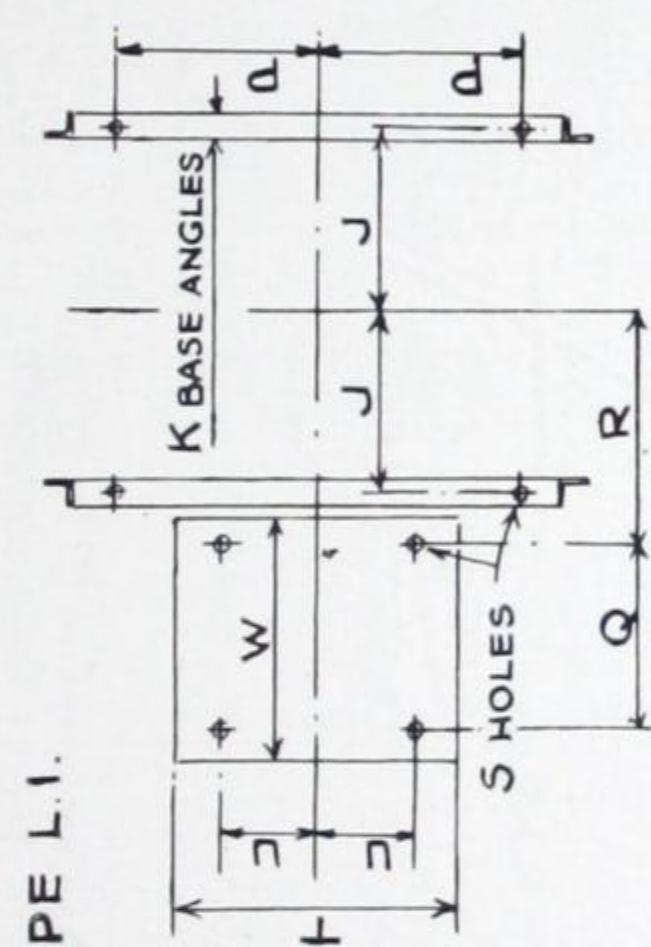
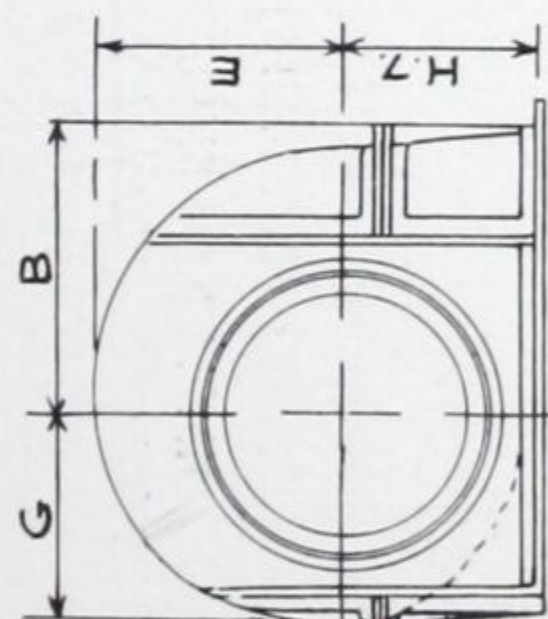
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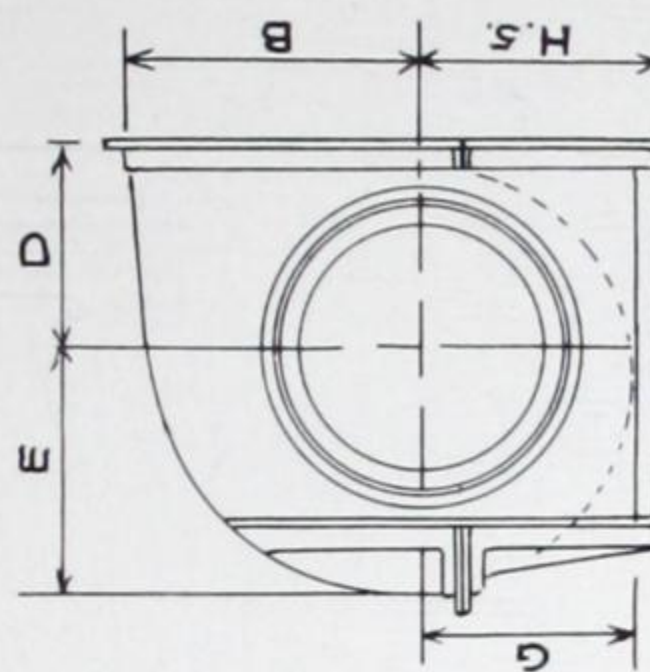
TYPE L.2.



TYPE L.7.



TYPE L.5.



TYPE L.6.

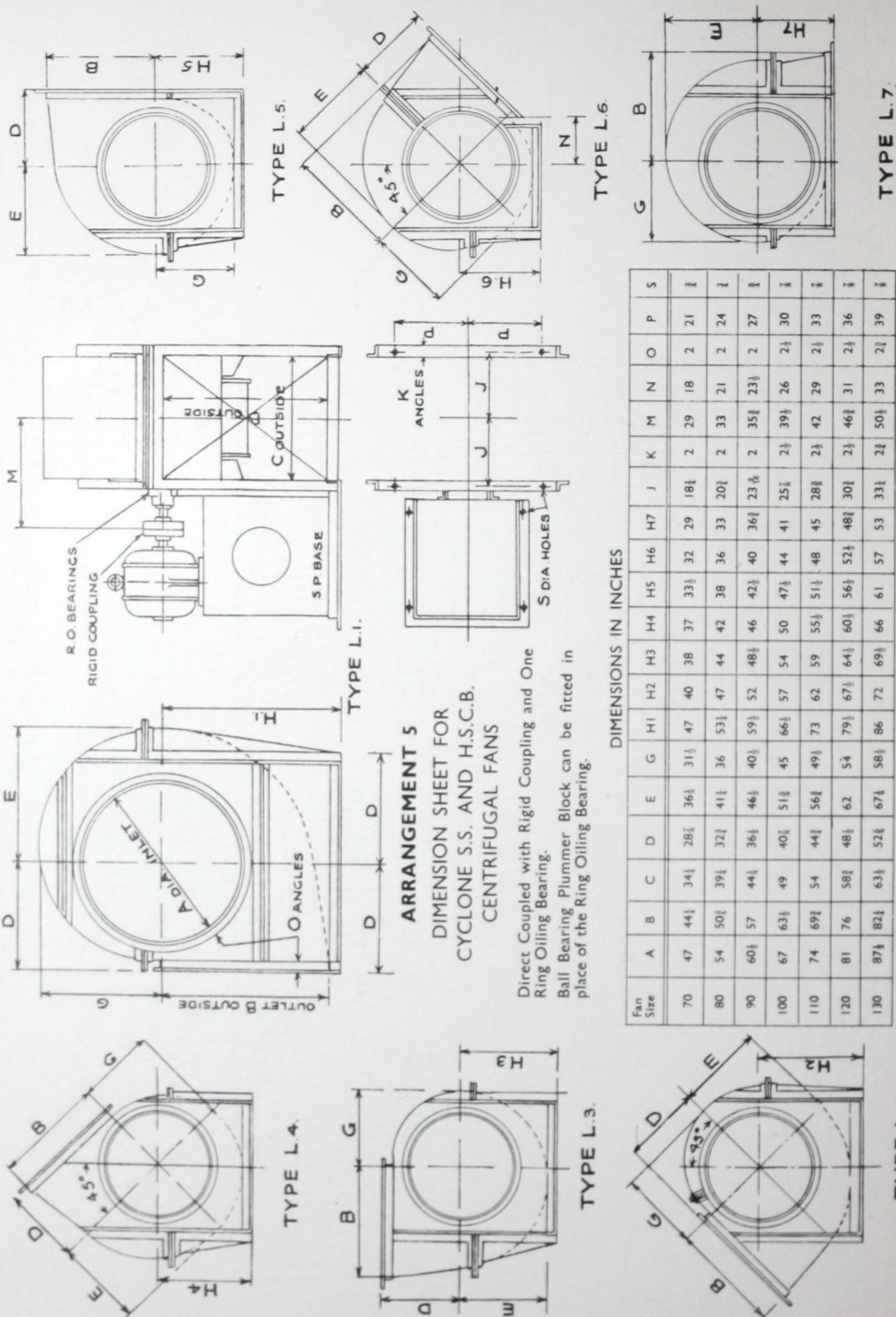
ARRANGEMENT 3. DIMENSION SHEET FOR CYCLONE S.S. & H.S.C.B. CENTRIFUGAL FANS

Fan Size	DIMENSIONS IN INCHES																				Pulleys S.S. Fans			Pulleys H.S.C.B. Fans							
	A	B	C	D	E	G	H1	H2	H3	H4	H5	H6	H7	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Dia.	Wide		
70	47	44½	34½	28⅝	36⅝	31½	47	40	38	37	33½	33½	33½	18½	2	18	34⅝	18	2	21	24	22⅝	⅝	30	11	33½	30	24	7	18	6
80	54	50½	39½	32½	41½	36	53½	47	44	42	38	36	33½	20½	2	19	36⅝	21	2	24	24	24⅝	⅝	30	11	33½	30	26	7	20	7
90	60½	57	44½	36½	46½	40½	59½	52	48½	46	42½	40	36½	23⅝	2	19	39½	23½	2	27	24	27⅝	⅝	30	11	33½	30	28	9	22	7
100	67	63½	49	40½	51½	45	66½	57	54	50	47½	44	41½	25⅝	2½	24½	48½	26	2½	30	34	31⅝	⅝	36	14	41½	42	30	9	26	8
110	74	69½	54	44½	56½	49½	73	62	59	55½	51½	48	45	28½	2½	24½	50½	29	2½	33	34	33⅝	⅝	36	14	41½	42	32	12	28	8
120	81	76	58½	48½	62	54	79½	67½	64½	60½	56½	52½	48½	30½	2½	26	53	31	2½	36	34	36	⅝	36	14	42	42	34	12	30	10
130	87½	82½	63½	52½	67½	58½	86	72	69½	66	61	57	53	33½	2½	27	55½	33	2½	39	34	38⅝	⅝	36	14	43	42	36	15	32	10

Standard Equipment supplied with Ring Oiling Bearings.

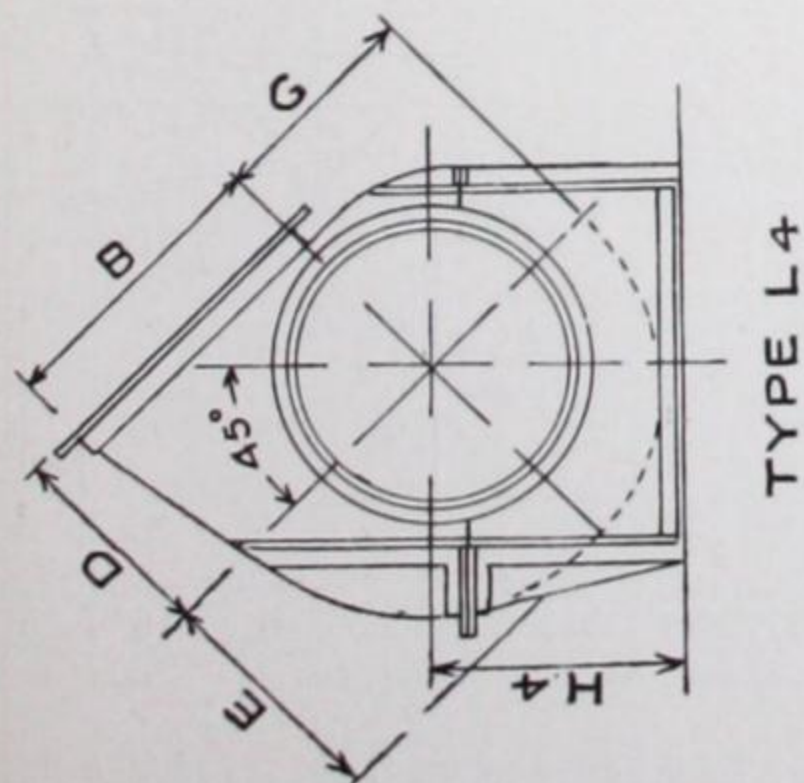
Ball Bearing Plummer Blocks can be fitted when required.



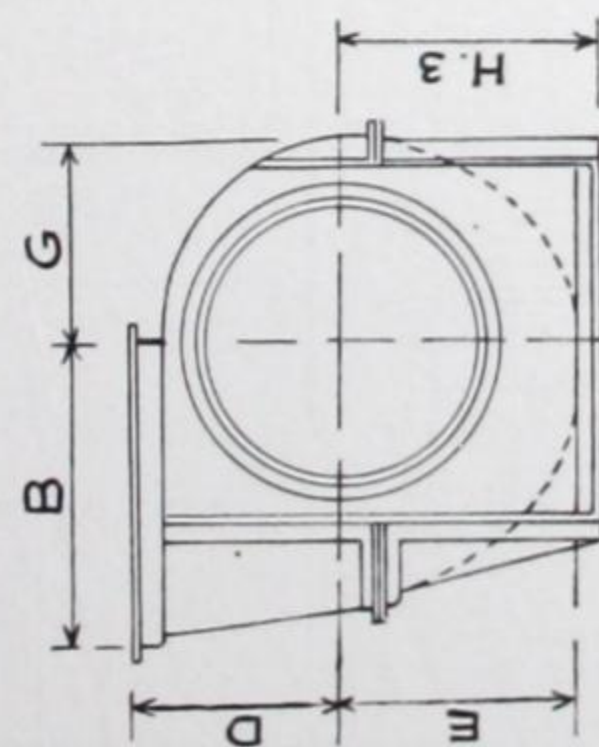


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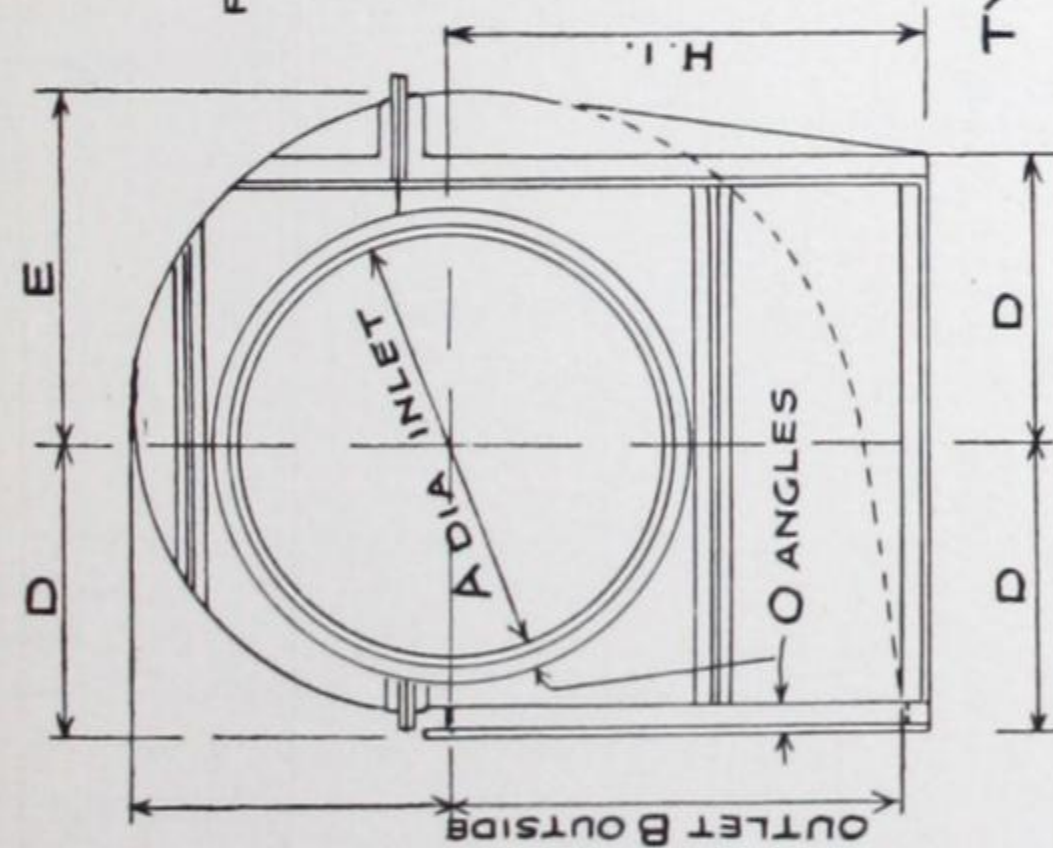




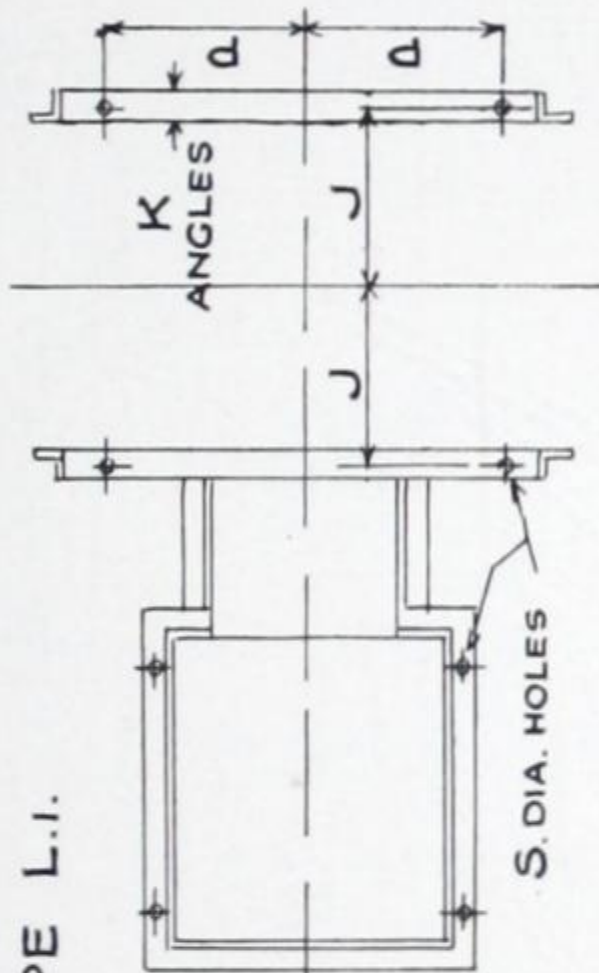
TYPE L.4



TYPE L.3



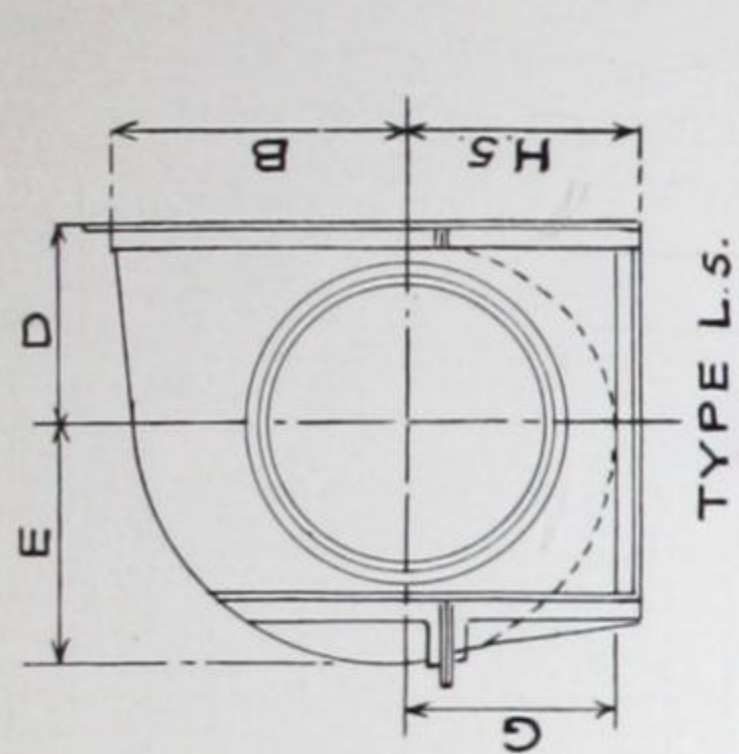
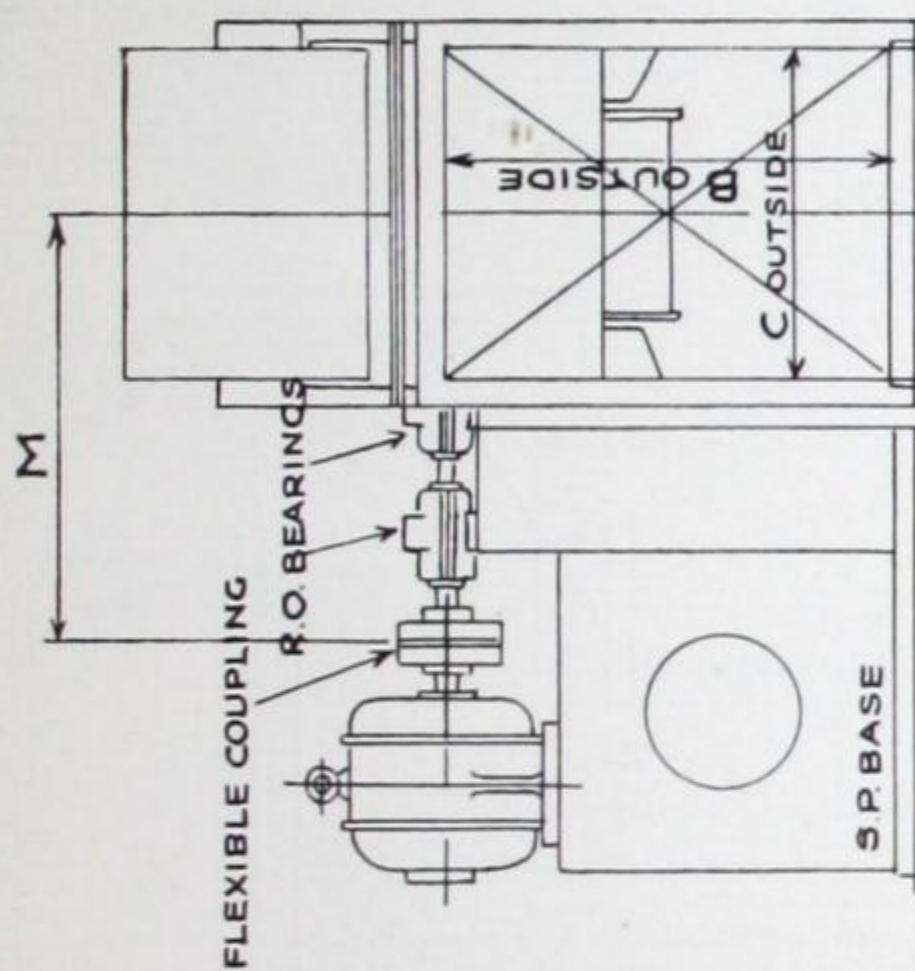
TYPE L.1.



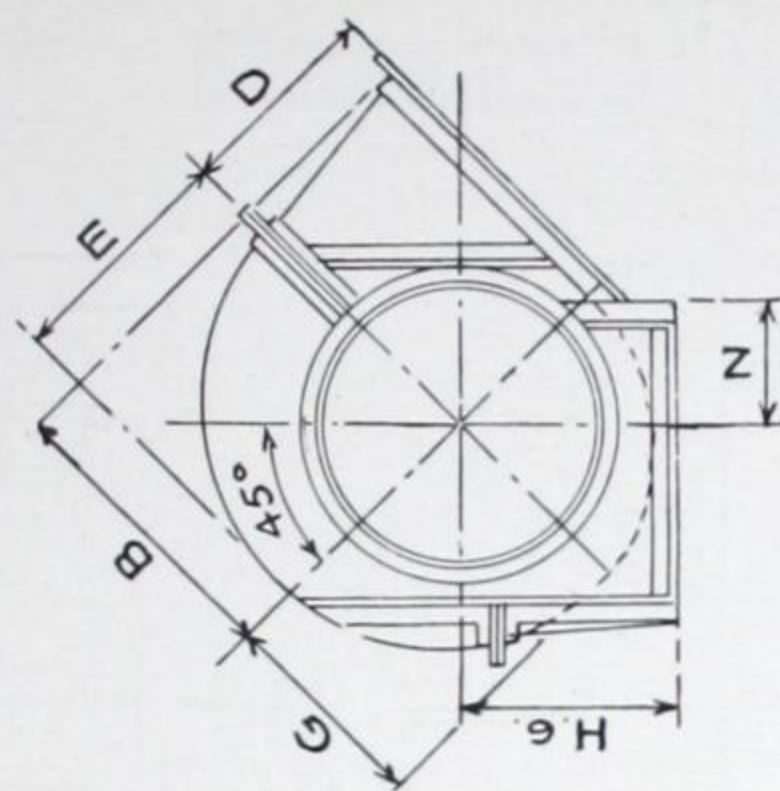
### ARRANGEMENT 6

#### DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

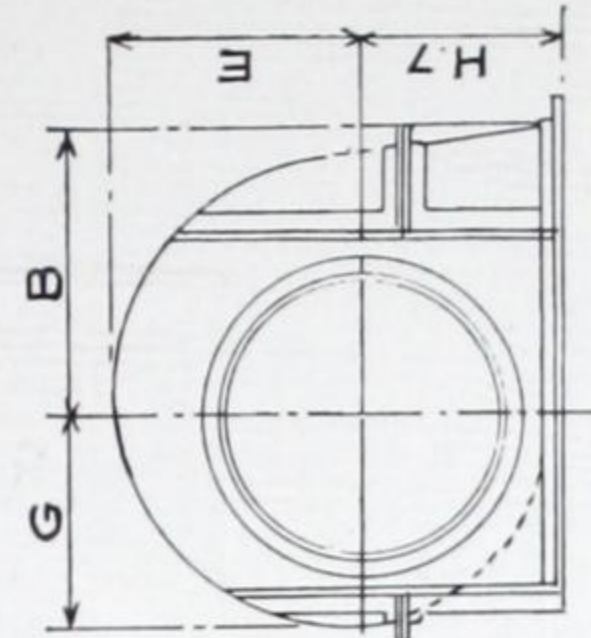
Direct Coupled with Flexible Coupling and  
Two Ring Oiling Bearings.  
Ball Bearing Plummer Blocks can be fitted in  
place of the Two Ring Oiling Bearings.



TYPE L.5.



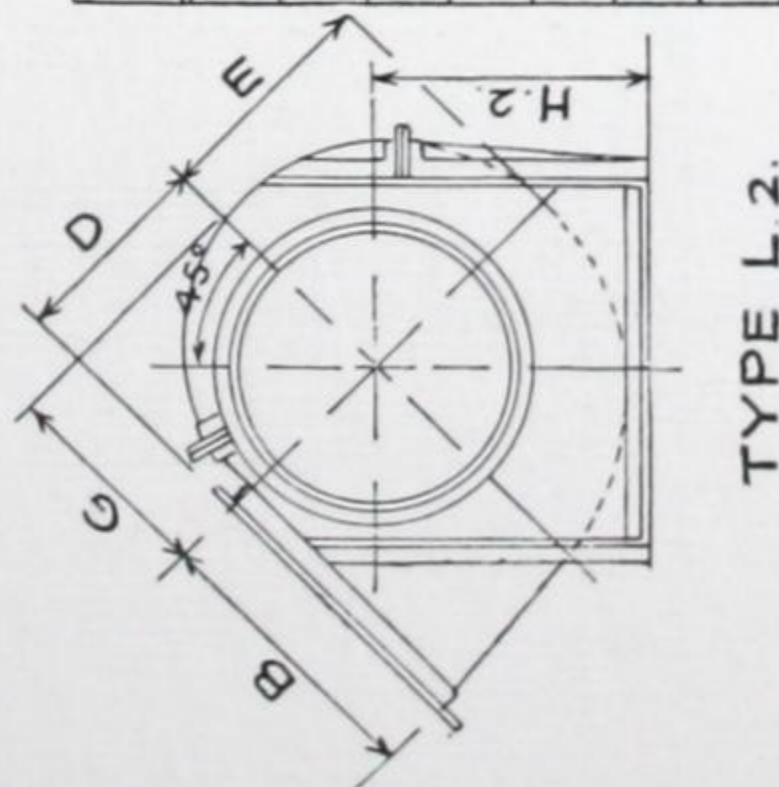
TYPE L.6.



TYPE L.7.

#### DIMENSIONS IN INCHES

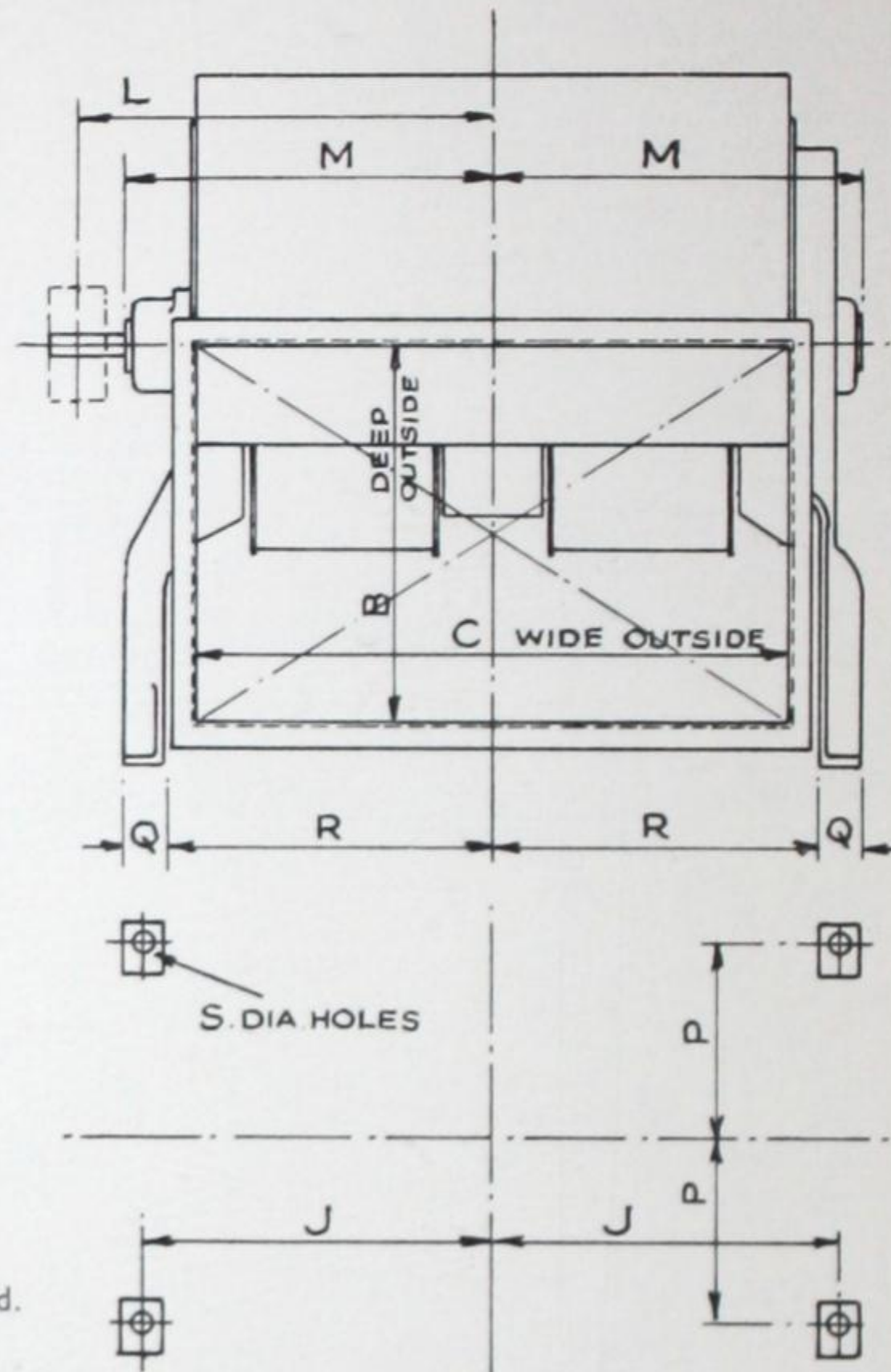
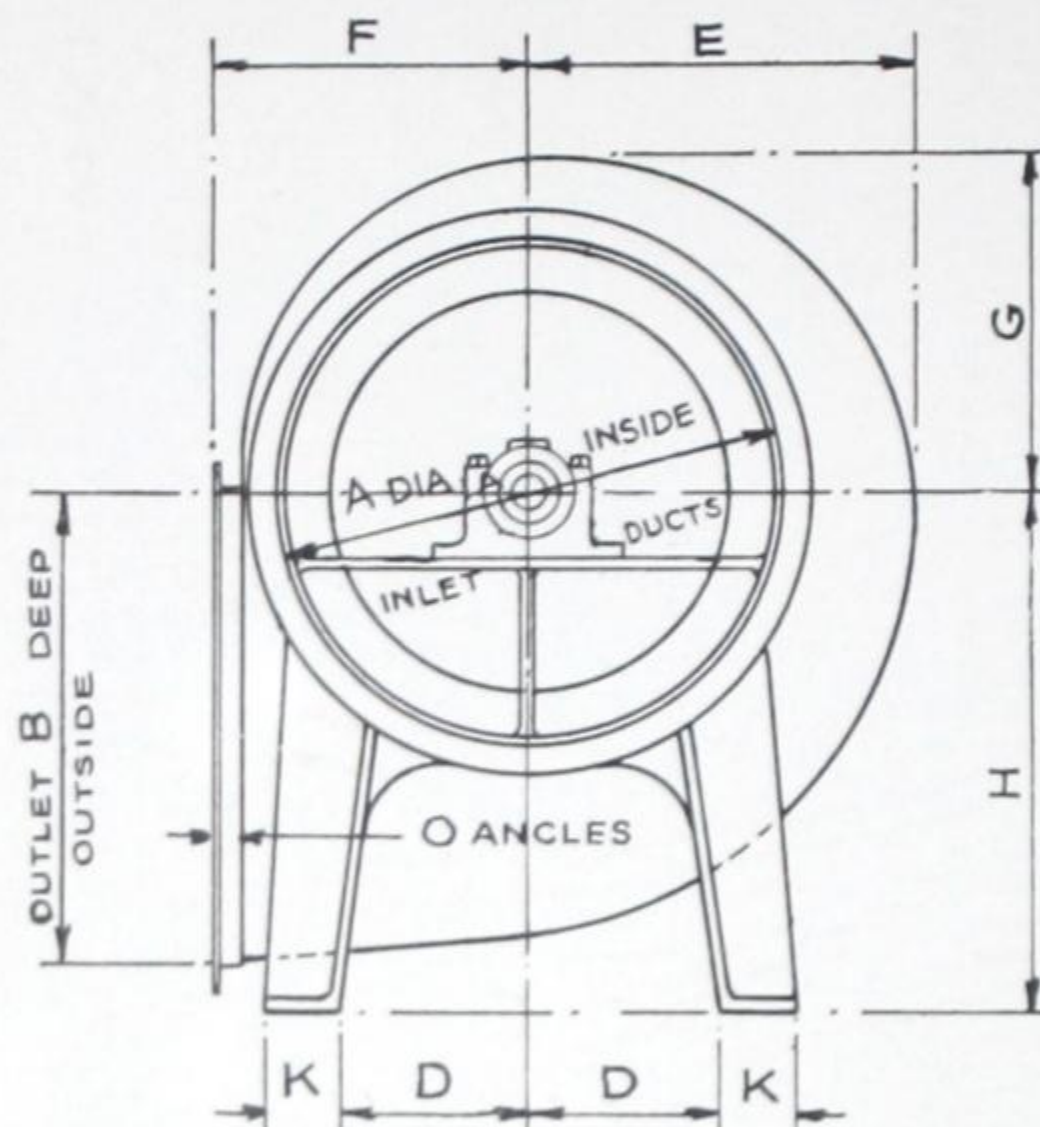
Fan Size	A	B	C	D	E	G	H1	H2	H3	H4	H5	H6	H7	J	K	M	N	O	P	S
70	47	44½	34½	28½	36½	31½	47	40	38	37	33½	32	29	18½	2	43½	18	2	21	1
80	54	50½	39½	32½	41½	36	53½	47	44	42	38	36	33	20½	2	50	21	2	24	1
90	60½	57	44½	36½	46½	40½	59½	52	48½	46	42½	40	36½	23½	2	53½	23½	2	27	1
100	67	63½	49	40½	51½	45	66½	57	54	50	47½	44	41	25½	2½	58	26	2½	30	1
110	74	69½	54	44½	56½	49½	73	62	59	55½	51½	48	45	28½	2½	61½	29	2½	33	1
120	81	76	58½	48½	62	54	79½	67½	64½	60½	56½	52½	48½	30½	2½	69½	31	2½	36	1
130	87½	82½	63½	52½	67½	58½	86	72	69½	66	61	57	53	33½	2½	76	33	2½	39	1



TYPE L.2.



# CYCLONE



## DOUBLE INLET DOUBLE WIDTH

Standard Equipment supplied with Ring Oiling Bearings.  
Ball Bearing Plummer Blocks can be fitted when required.

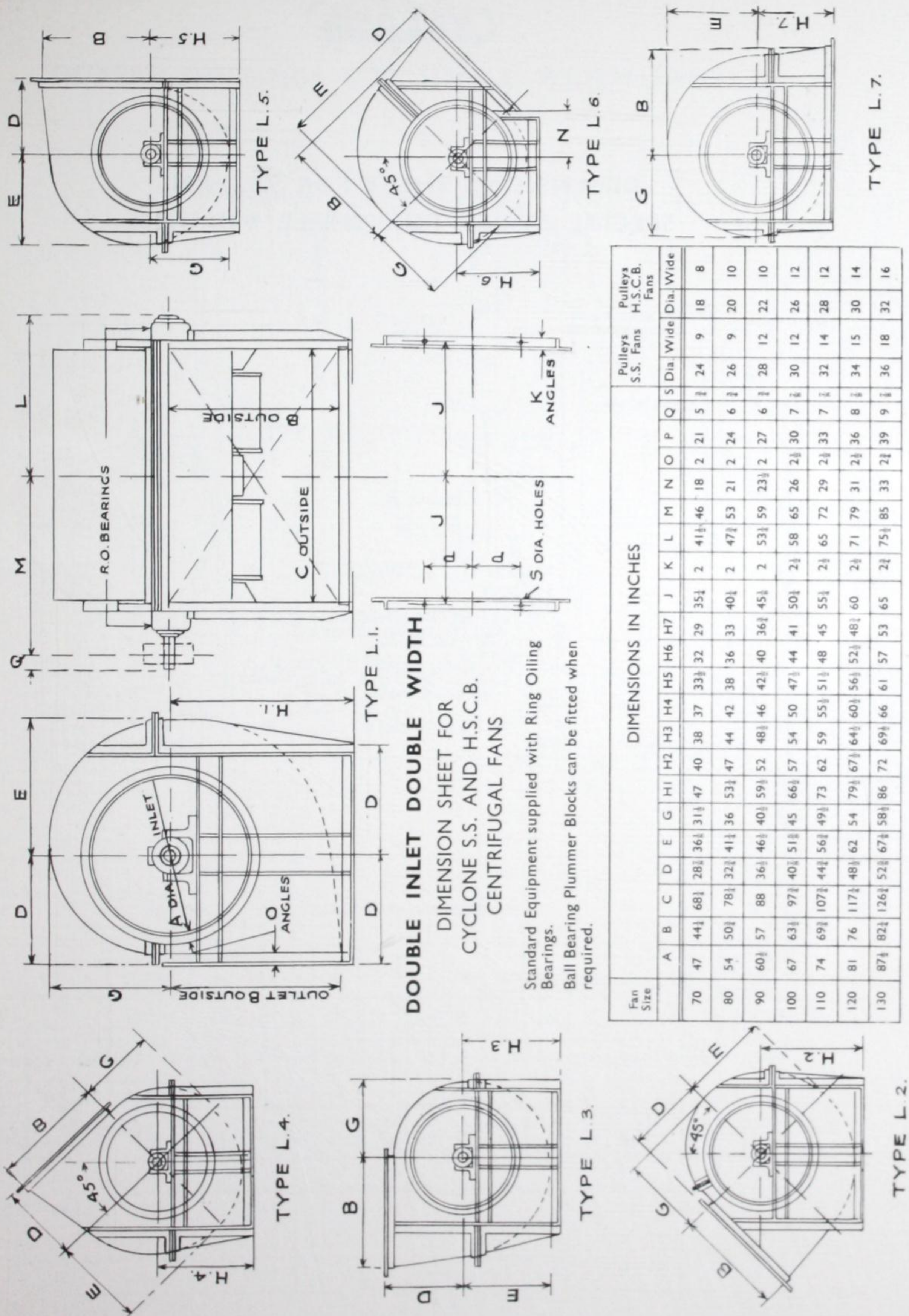
## DIMENSION SHEET FOR CYCLONE S.S. AND H.S.C.B. CENTRIFUGAL FANS

### DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	F	G	H	J	K	L	M	O	P	Q	R	S	Pulleys S.S. Fans		Pulleys H.S.C.B. Fans	
																		Dia.	Wide	Dia.	Wide
20	13 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	19 <sup>1</sup> / <sub>2</sub>	5	10 <sup>1</sup> / <sub>2</sub>	8 <sup>1</sup> / <sub>2</sub>	9	14 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	14	1 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	6	5	4	3
25	17	15 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>2</sub>	6	12 <sup>1</sup> / <sub>2</sub>	10 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	3	19	16 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	8	1 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	7	5	5	4
30	20 <sup>1</sup> / <sub>2</sub>	19	29 <sup>1</sup> / <sub>2</sub>	7	15 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	13 <sup>1</sup> / <sub>2</sub>	20 <sup>1</sup> / <sub>2</sub>	17 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	21	18 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	9 <sup>1</sup> / <sub>2</sub>	2	16 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	8	5	6	5
35	24	22 <sup>1</sup> / <sub>2</sub>	34 <sup>1</sup> / <sub>2</sub>	8	18 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	24	19 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	23 <sup>1</sup> / <sub>2</sub>	20 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	10 <sup>1</sup> / <sub>2</sub>	2	18 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	10	5	7	5
40	27 <sup>1</sup> / <sub>2</sub>	25 <sup>1</sup> / <sub>2</sub>	39 <sup>1</sup> / <sub>2</sub>	9	20 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	18	27 <sup>1</sup> / <sub>2</sub>	22 <sup>1</sup> / <sub>2</sub>	4	26	22 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	11 <sup>1</sup> / <sub>2</sub>	2	21 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	14	6	10	6
45	30 <sup>1</sup> / <sub>2</sub>	28 <sup>1</sup> / <sub>2</sub>	44 <sup>1</sup> / <sub>2</sub>	10	23 <sup>1</sup> / <sub>2</sub>	18 <sup>1</sup> / <sub>2</sub>	20 <sup>1</sup> / <sub>2</sub>	31	25 <sup>1</sup> / <sub>2</sub>	4	28 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	23 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	16	6	11	6
50	34	31 <sup>1</sup> / <sub>2</sub>	48 <sup>1</sup> / <sub>2</sub>	11	25 <sup>1</sup> / <sub>2</sub>	20 <sup>1</sup> / <sub>2</sub>	22 <sup>1</sup> / <sub>2</sub>	34 <sup>1</sup> / <sub>2</sub>	27 <sup>1</sup> / <sub>2</sub>	4	30 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	14	2 <sup>1</sup> / <sub>2</sub>	26 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	18	7	12	7
55	37 <sup>1</sup> / <sub>2</sub>	34 <sup>1</sup> / <sub>2</sub>	53 <sup>1</sup> / <sub>2</sub>	12 <sup>1</sup> / <sub>2</sub>	28 <sup>1</sup> / <sub>2</sub>	22 <sup>1</sup> / <sub>2</sub>	24 <sup>1</sup> / <sub>2</sub>	37 <sup>1</sup> / <sub>2</sub>	30 <sup>1</sup> / <sub>2</sub>	4	34 <sup>1</sup> / <sub>2</sub>	30 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	28 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	20	8	14	8
60	41	38	58 <sup>1</sup> / <sub>2</sub>	13	31	24 <sup>1</sup> / <sub>2</sub>	27	40 <sup>1</sup> / <sub>2</sub>	32 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	36 <sup>1</sup> / <sub>2</sub>	32 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	16 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	31 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	22	8	16	8

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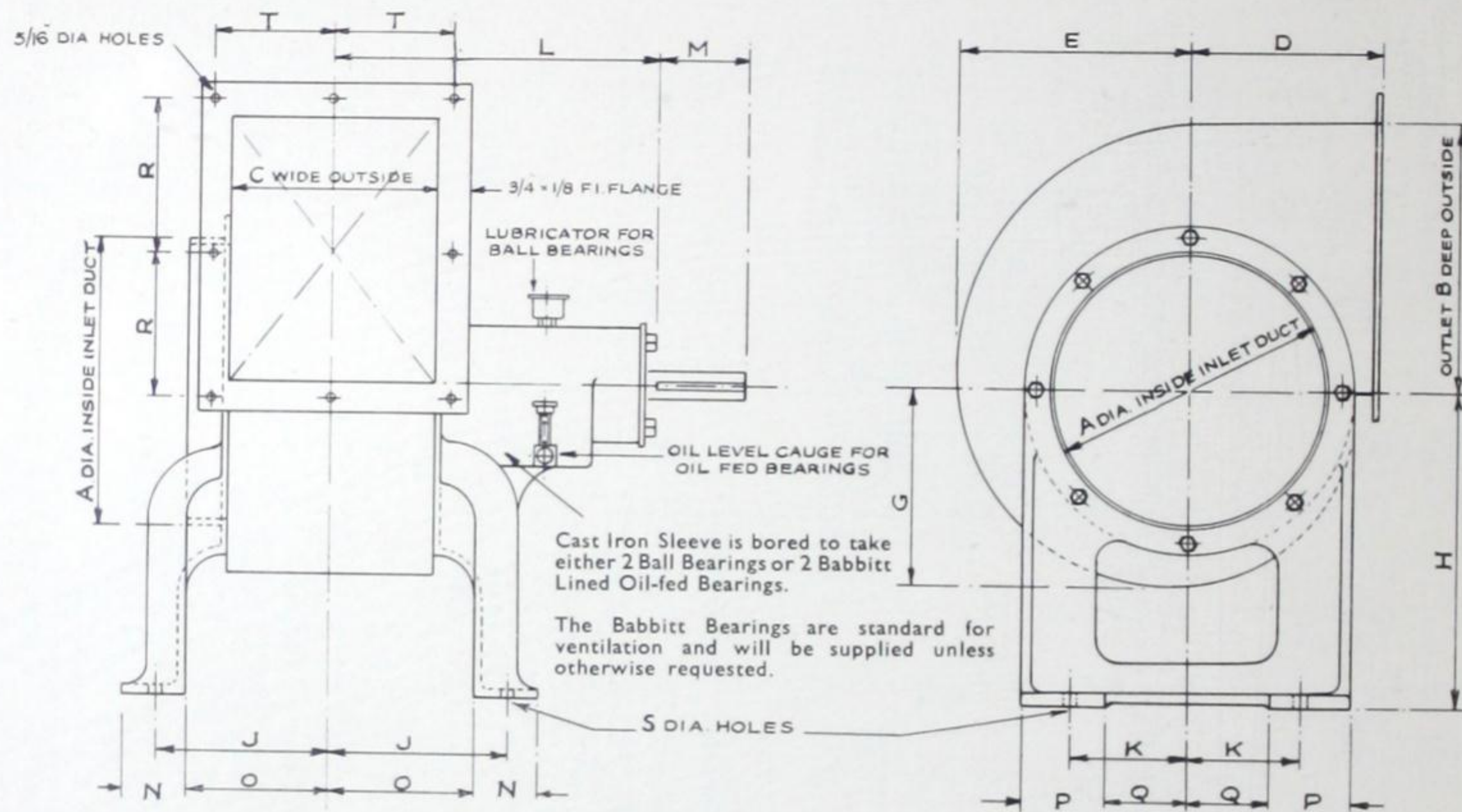






# CYCLONE

## DIMENSIONS SHEET FOR S.S. FANS SPECIAL SERIES FOR SMALL VOLUMES



DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	G	H	J	K	L	M	N	O	P	Q	R	S	T
10	6 <sup>5</sup> / <sub>8</sub>	6 <sup>3</sup> / <sub>8</sub>	5	4 <sup>1</sup> / <sub>2</sub>	5 <sup>7</sup> / <sub>32</sub>	4 <sup>17</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>2</sub>	4 <sup>5</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>	3	1 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	2	1 <sup>13</sup> / <sub>16</sub>	3 <sup>5</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>16</sub>
12 <sup>1</sup> / <sub>2</sub>	8 <sup>1</sup> / <sub>2</sub>	8	6 <sup>3</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>	5 <sup>5</sup> / <sub>8</sub>	9	5	3 <sup>1</sup> / <sub>4</sub>	8 <sup>3</sup> / <sub>4</sub>	3	1 <sup>1</sup> / <sub>2</sub>	4 <sup>3</sup> / <sub>32</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>5</sup> / <sub>16</sub>	4 <sup>7</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>8</sub>	3 <sup>17</sup> / <sub>32</sub>
15	10 <sup>1</sup> / <sub>4</sub>	9 <sup>9</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub>	10 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>	4	9 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	4 <sup>3</sup> / <sub>4</sub>	3	2 <sup>3</sup> / <sub>4</sub>	5 <sup>7</sup> / <sub>32</sub>	3 <sup>3</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>32</sub>
17 <sup>1</sup> / <sub>2</sub>	12	11 <sup>1</sup> / <sub>8</sub>	8 <sup>5</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	9	7 <sup>7</sup> / <sub>8</sub>	12 <sup>1</sup> / <sub>2</sub>	6 <sup>3</sup> / <sub>16</sub>	5	10 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>2</sub>	5 <sup>5</sup> / <sub>16</sub>	3	3 <sup>3</sup> / <sub>4</sub>	6	3 <sup>3</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>4</sub>

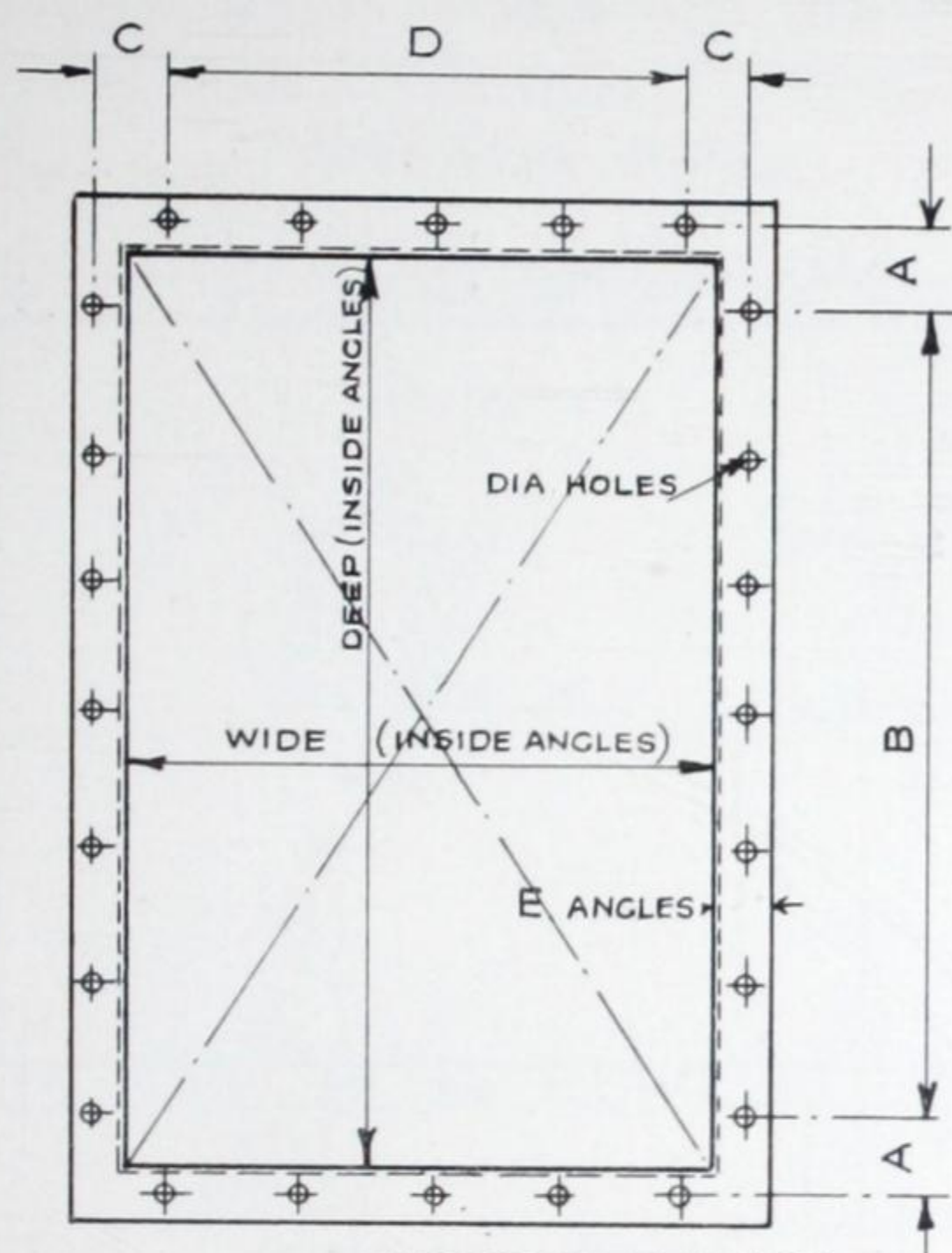
Casings are suitable for either hand or direction of discharge.

MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

## OUTLET DRILLINGS FOR SINGLE WIDTH FANS



DIMENSIONS IN INCHES

Fan Size	OUTLET		A	B	No. of Pitches in Depth	Pitch of Holes	C	D	No. of Pitches in Width	Pitch of Holes	Dia. of Holes	E Outlet Angles
	Deep Outside	Wide Outside										
20	12 $\frac{11}{16}$	19 $\frac{5}{8}$	2 $\frac{1}{8}$	10	2	5	$\frac{9}{16}$	20	4	5	$\frac{5}{16}$	1 $\frac{1}{4}$
25	15 $\frac{7}{8}$	24 $\frac{1}{2}$	1 $\frac{3}{16}$	15	3	5	3	20	4	5	$\frac{5}{16}$	1 $\frac{1}{4}$
30	19	29 $\frac{3}{8}$	2	16 $\frac{1}{2}$	3	5 $\frac{1}{2}$	1 $\frac{11}{16}$	27 $\frac{1}{2}$	5	5 $\frac{1}{2}$	$\frac{5}{16}$	1 $\frac{1}{4}$
35	22 $\frac{1}{8}$	34 $\frac{1}{8}$	1 $\frac{13}{16}$	20	4	5	2 $\frac{13}{16}$	30	6	5	$\frac{3}{8}$	1 $\frac{1}{4}$
40	25 $\frac{3}{8}$	39 $\frac{1}{8}$	2 $\frac{7}{16}$	22	4	5 $\frac{1}{2}$	1 $\frac{1}{16}$	38 $\frac{1}{2}$	7	5 $\frac{1}{2}$	$\frac{3}{16}$	1 $\frac{1}{4}$
45	28 $\frac{1}{2}$	44	3 $\frac{1}{8}$	24	4	6	1 $\frac{7}{8}$	42	7	6	$\frac{3}{16}$	1 $\frac{1}{2}$
50	31 $\frac{3}{4}$	48 $\frac{7}{8}$	1 $\frac{3}{4}$	30	6	5	2 $\frac{13}{16}$	45	9	5	$\frac{3}{16}$	1 $\frac{1}{2}$
55	34 $\frac{7}{8}$	53 $\frac{7}{8}$	1 $\frac{13}{16}$	33	6	5 $\frac{1}{2}$	3 $\frac{1}{16}$	49 $\frac{1}{2}$	9	5 $\frac{1}{2}$	$\frac{3}{16}$	1 $\frac{1}{2}$
60	38	58 $\frac{5}{8}$	2	36	6	6	3 $\frac{5}{16}$	54	9	6	$\frac{1}{2}$	1 $\frac{3}{4}$
70	44 $\frac{1}{4}$	68 $\frac{1}{4}$	3 $\frac{3}{4}$	39	6	6 $\frac{1}{2}$	2 $\frac{3}{4}$	65	10	6 $\frac{1}{2}$	$\frac{1}{2}$	2
80	50 $\frac{3}{4}$	78 $\frac{1}{4}$	3 $\frac{3}{4}$	45 $\frac{1}{2}$	7	6 $\frac{1}{2}$	4 $\frac{1}{2}$	71 $\frac{1}{2}$	11	6 $\frac{1}{2}$	$\frac{1}{2}$	2
90	57	88	3 $\frac{5}{8}$	52	8	6 $\frac{1}{2}$	2 $\frac{7}{8}$	84 $\frac{1}{2}$	13	6 $\frac{1}{2}$	$\frac{1}{2}$	2
100	63 $\frac{1}{2}$	97 $\frac{3}{4}$	3 $\frac{7}{8}$	58 $\frac{1}{2}$	9	6 $\frac{1}{2}$	4 $\frac{3}{4}$	91	14	6 $\frac{1}{2}$	$\frac{1}{2}$	2 $\frac{1}{2}$
110	69 $\frac{3}{4}$	107 $\frac{3}{4}$	3 $\frac{3}{4}$	65	10	6 $\frac{1}{2}$	3 $\frac{1}{4}$	104	16	6 $\frac{1}{2}$	$\frac{1}{2}$	2 $\frac{1}{2}$
120	76	117 $\frac{1}{4}$	4 $\frac{3}{8}$	70	10	7	4	112	16	7	$\frac{5}{8}$	2 $\frac{1}{2}$
130	82 $\frac{1}{4}$	126 $\frac{3}{4}$	4 $\frac{1}{4}$	77	11	7	5 $\frac{1}{2}$	119	17	7	$\frac{5}{8}$	2 $\frac{3}{4}$

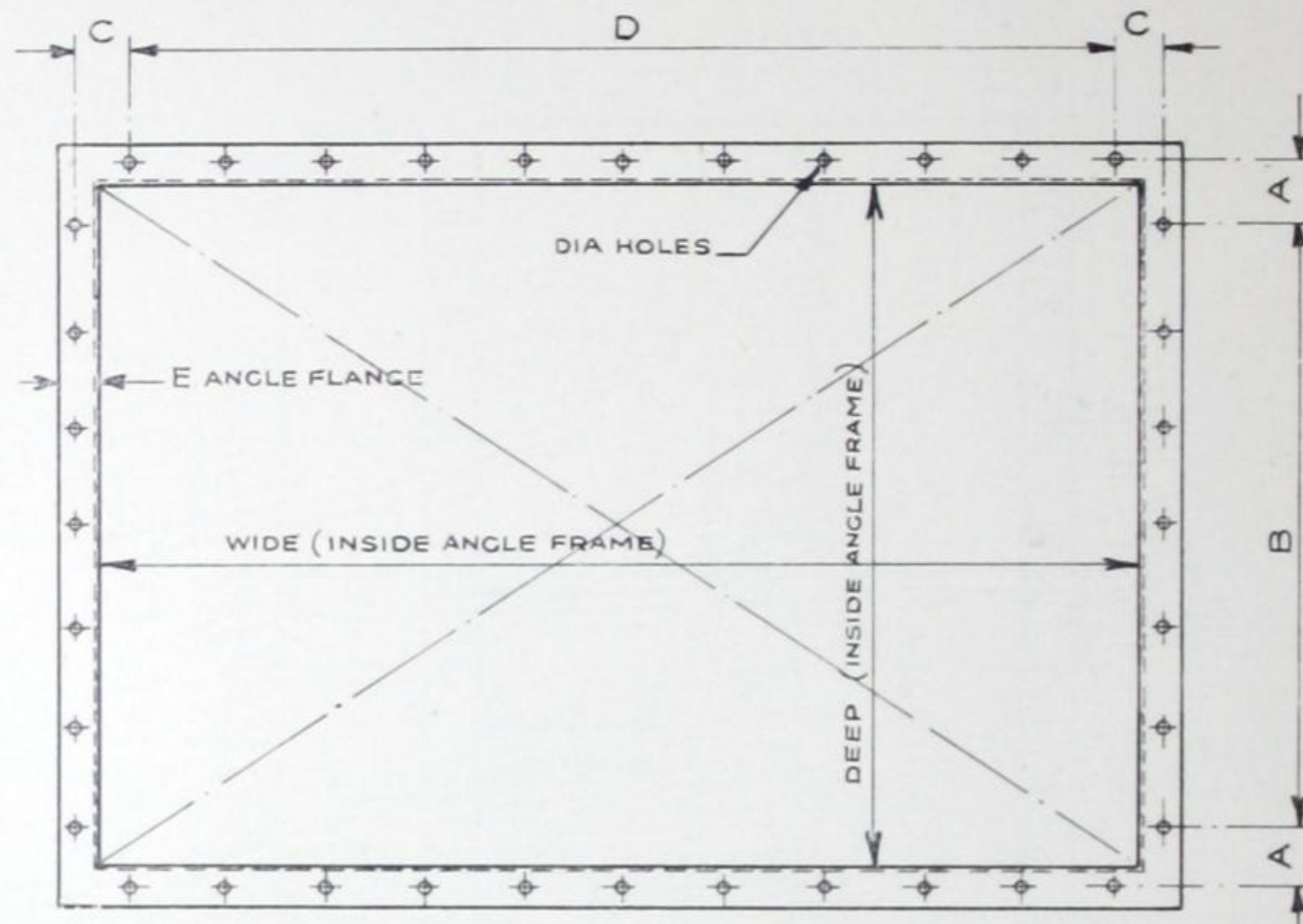
### ERRATA

This DIMENSIONS TABLE applies to PAGE 90.



# CYCLONE

## OUTLET DRILLINGS FOR DOUBLE WIDTH FANS



DIMENSIONS IN INCHES

Fan Size	OUTLET		A	B	No. of Pitches in Depth	Pitch of Holes	C	D	No. of Pitches in Width	Pitch of Holes	Dia. of Holes	E Outlet Angles
	Deep Outside	Wide Outside										
20	12 $\frac{11}{16}$	9 $\frac{7}{8}$	2 $\frac{1}{8}$	10	2	5	1 $\frac{11}{16}$	8	2	4	$\frac{5}{16}$	1 $\frac{1}{4}$
25	15 $\frac{7}{8}$	12 $\frac{5}{16}$	1 $\frac{3}{16}$	15	3	5	2 $\frac{3}{16}$	9 $\frac{1}{2}$	2	4 $\frac{3}{4}$	$\frac{5}{16}$	1 $\frac{1}{4}$
30	19	14 $\frac{3}{4}$	2	16 $\frac{1}{2}$	3	5 $\frac{1}{2}$	2 $\frac{5}{8}$	11	2	5 $\frac{1}{2}$	$\frac{5}{16}$	1 $\frac{1}{4}$
35	22 $\frac{1}{8}$	17 $\frac{1}{8}$	1 $\frac{13}{16}$	20	4	5	1 $\frac{13}{16}$	15	3	5	$\frac{3}{8}$	1 $\frac{1}{4}$
40	25 $\frac{3}{8}$	19 $\frac{5}{8}$	2 $\frac{7}{16}$	22	4	5 $\frac{1}{2}$	1 $\frac{15}{16}$	17 $\frac{1}{4}$	3	5 $\frac{3}{4}$	$\frac{3}{8}$	1 $\frac{1}{4}$
45	28 $\frac{1}{2}$	22 $\frac{1}{16}$	3 $\frac{1}{8}$	24	4	6	1 $\frac{7}{8}$	20	4	5	$\frac{3}{8}$	1 $\frac{1}{2}$
50	31 $\frac{3}{4}$	24 $\frac{1}{2}$	1 $\frac{3}{4}$	30	6	5	2 $\frac{1}{8}$	22	4	5 $\frac{1}{2}$	$\frac{3}{8}$	1 $\frac{1}{2}$
55	34 $\frac{7}{8}$	27	1 $\frac{13}{16}$	33	6	5 $\frac{1}{2}$	2 $\frac{3}{8}$	24	4	6	$\frac{3}{8}$	1 $\frac{1}{2}$
60	38	29 $\frac{3}{8}$	2	36	6	6	3 $\frac{3}{16}$	25	4	6 $\frac{1}{4}$	$\frac{1}{2}$	1 $\frac{3}{4}$
70	44 $\frac{1}{4}$	34 $\frac{1}{4}$	3 $\frac{3}{4}$	39	6	6 $\frac{1}{2}$	2	32 $\frac{1}{2}$	5	6 $\frac{1}{2}$	$\frac{1}{2}$	2
80	50 $\frac{3}{4}$	39 $\frac{1}{4}$	3 $\frac{3}{4}$	45 $\frac{1}{2}$	7	6 $\frac{1}{2}$	1 $\frac{1}{4}$	39	6	6 $\frac{1}{2}$	$\frac{1}{2}$	2
90	57	44 $\frac{1}{8}$	3 $\frac{5}{8}$	52	8	6 $\frac{1}{2}$	3 $\frac{11}{16}$	39	6	6 $\frac{1}{2}$	$\frac{1}{2}$	2
100	63 $\frac{1}{2}$	49	3 $\frac{7}{8}$	58 $\frac{1}{2}$	9	6 $\frac{1}{2}$	3 $\frac{1}{8}$	45 $\frac{1}{2}$	7	6 $\frac{1}{2}$	$\frac{1}{2}$	2 $\frac{1}{2}$
110	69 $\frac{3}{4}$	54	3 $\frac{3}{4}$	65	10	6 $\frac{1}{2}$	2 $\frac{3}{8}$	52	8	6 $\frac{1}{2}$	$\frac{1}{2}$	2 $\frac{1}{2}$
120	76	58 $\frac{3}{4}$	4 $\frac{3}{8}$	70	10	7	2 $\frac{3}{4}$	56	8	7	$\frac{5}{8}$	2 $\frac{1}{2}$
130	82 $\frac{1}{4}$	63 $\frac{1}{2}$	4 $\frac{1}{4}$	77	11	7	5 $\frac{3}{8}$	56	8	7	$\frac{5}{8}$	2 $\frac{3}{4}$

### ERRATA

This  
DIMENSIONS  
TABLE  
applies to  
PAGE 89.

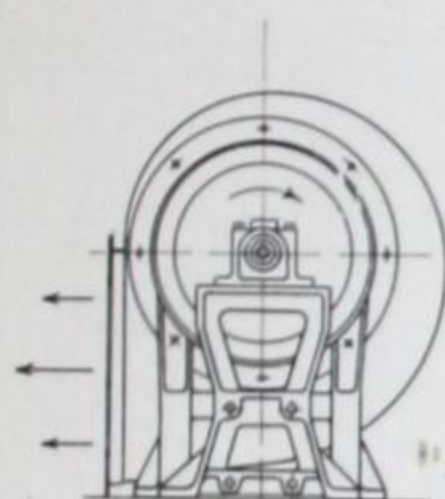
MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



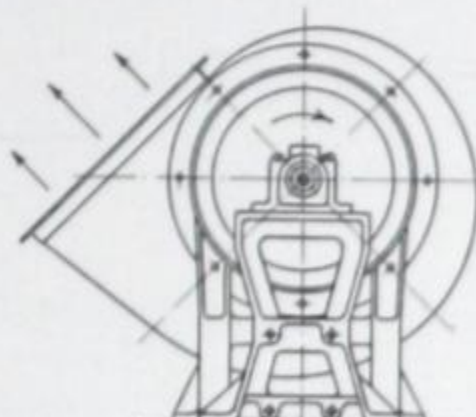
# CYCLONE

DIAGRAMS SHEWING DIRECTIONS OF ROTATION AND ANGLES OF DISCHARGE FOR ALL CYCLONE FANS AS VIEWED FROM THE DRIVING SIDE.

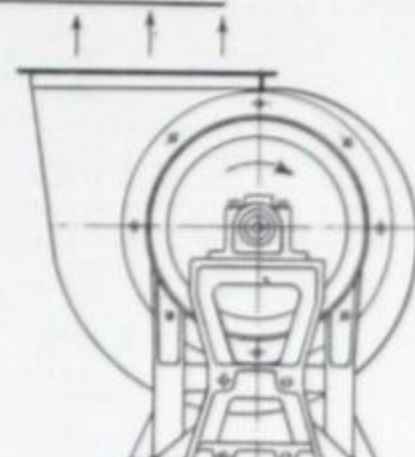
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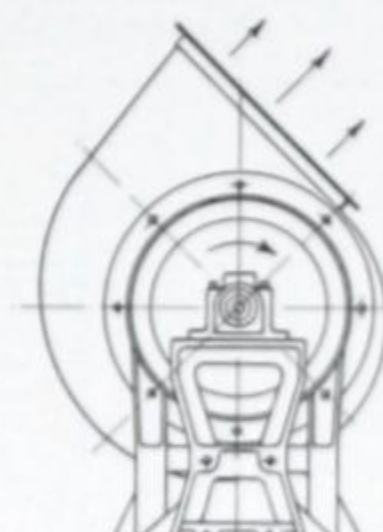
R1.



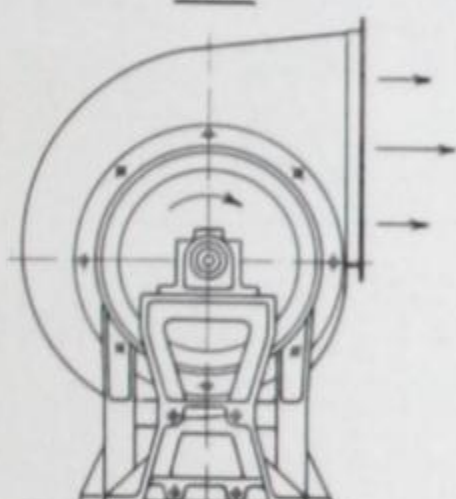
R2.



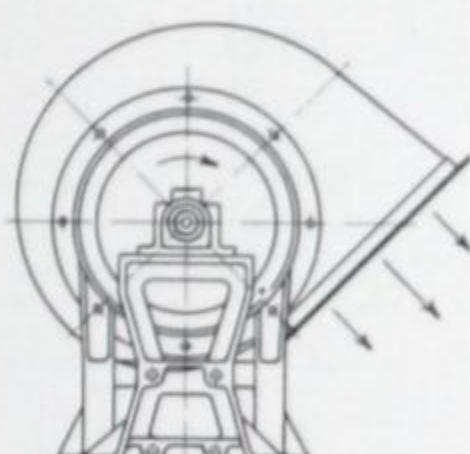
R3.



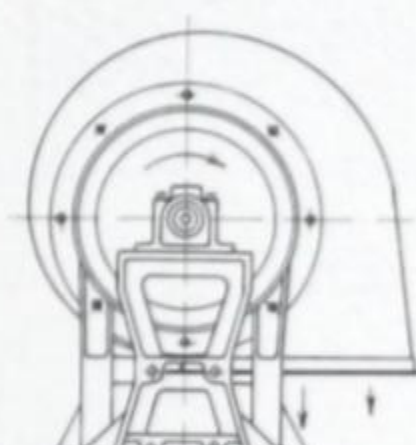
R4.



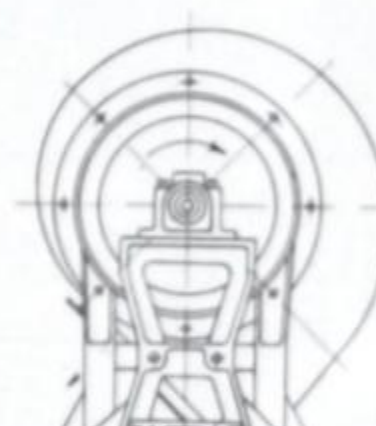
R5.



R6.

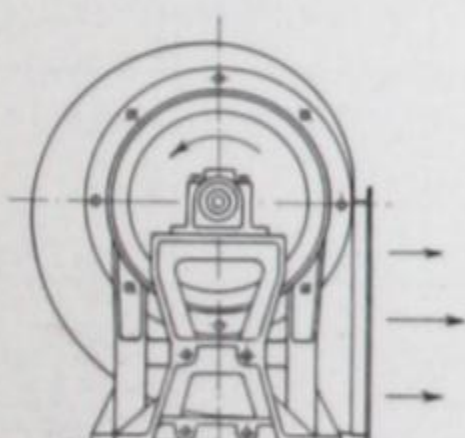


R7.

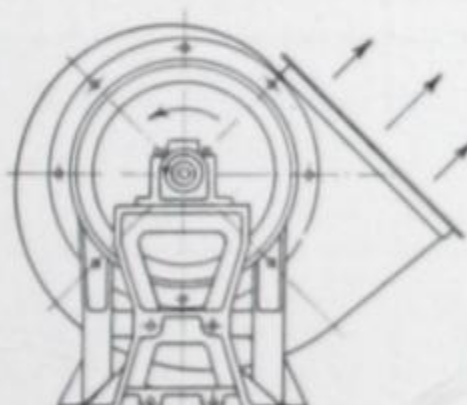


R8.

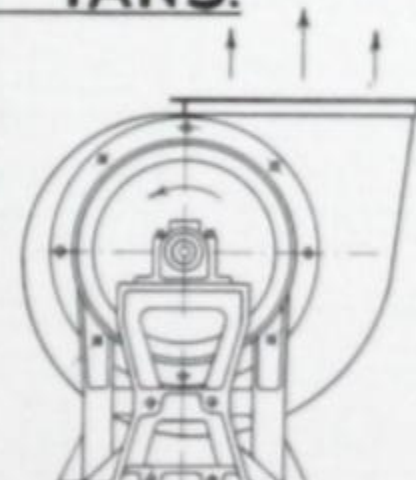
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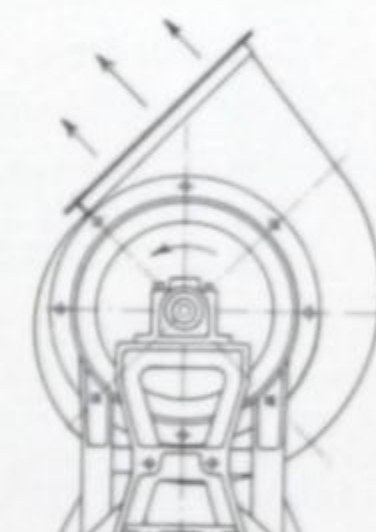
L1.



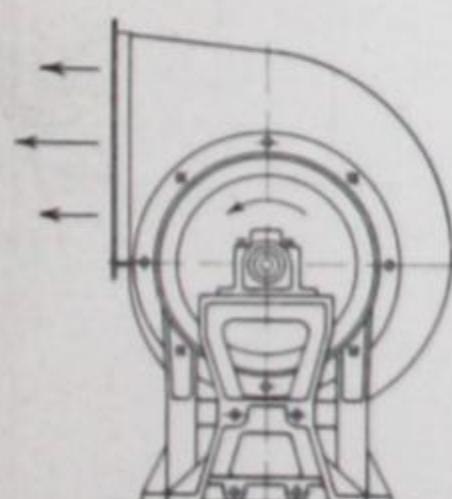
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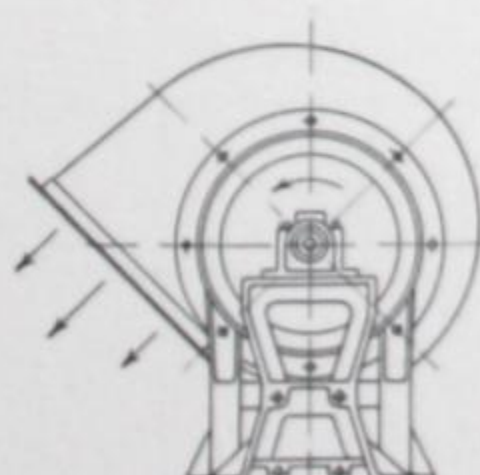
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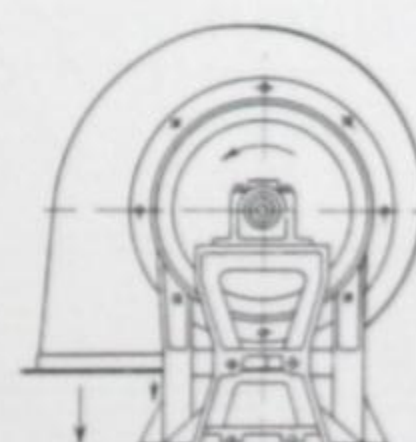
L4.



L5.



L6.



L7.



L8.

The S.S. and H.S.C.B. Fans are so constructed with cast iron side frames up to and including size 60 that they may be adjusted to any of the above types at will.

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# CYCLONE

## GOOD OPERATING VELOCITIES AND TIP SPEEDS FOR S.S. MULTIVANE VENTILATING FANS

Resistance Head in inches W.G.	Outlet Velocity in feet per minute	Tip Speed in feet per minute
1	1000 to 1200	1520 to 1690
1	1000 „ 1200	1760 „ 1870
1	1100 „ 1300	1970 „ 2100
1	1100 „ 1400	2210 „ 2300
1	1200 „ 1400	2430 „ 2500
1	1300 „ 1600	2620 „ 2720
1	1400 „ 1800	2800 „ 2970
1	1500 „ 1900	3130 „ 3230
1	1600 „ 2000	3450 „ 3570
1	1700 „ 2200	3720 „ 3840
2	1800 „ 2400	3960 „ 4120
2	2000 „ 2600	4400 „ 4500
3	2200 „ 2800	4850 „ 4980

## GUIDE TO FAN OUTLET VELOCITIES FOR SILENT RUNNING.

	Inlet	Extract
Sound Studios, Churches, Operating Theatres, Libraries ...	800 to 1000 ft./min.	1000 to 1400 ft./min.
Cinemas, Theatres, Ballrooms ...	1000 to 1500 ft./min.	1200 to 1600 ft./min.
Restaurants, Hotels, Public Buildings, Offices, Stores ...	1200 to 1600 ft./min.	1400 to 1800 ft./min.
This table is a guide only and careful consideration should always be given to relative positions of Fans to Inlet or Extract Gratings, and possible transmission of noise through building structure.		

## CIRCUMFERENCE OF IMPELLER IN FEET FOR EACH FAN SIZE TYPES S.S. & H.S.C.B.

Fan Size	Circumference of Impeller in feet	Fan Size	Circumference of Impeller in feet
20	3.41	90	15.30
25	4.25	100	17.00
30	5.10	110	18.70
35	5.95	120	20.40
40	6.81	130	22.10
45	7.68	140	23.80
50	8.50	150	25.50
55	9.36	160	27.20
60	10.20	170	28.90
70	11.90	180	30.60
80	13.60		

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## CYCLONE

### HOW TO SELECT A "CYCLONE" VENTILATING FAN FOR STANDARD CONDITIONS

In the selection of fans for ventilation it is required to know:—

- (1) Cubic feet of air per minute to be moved.
- (2) Static pressure or resistance head required to move the air through the system.
- (3) What degree of noise is permissible.
- (4) The motive power available.

Where noise is traceable to the Fan it is caused either by excessive peripheral speed of the runner, or the Fan is too small for the duty required. A noisy Fan is usually one operated at a point considerably beyond its maximum efficiency. Fans should be selected as near as possible to the point of maximum efficiency, the cost of running, and the noise can then be held within control.

Opposite are listed Resistance Heads, corresponding outlet velocities, and tip speeds in feet per minute for the Cyclone S.S. Multivane Ventilating Fan. The operating velocities and tip speeds recommended are about the point of maximum efficiency for the S.S. Type Fan, and reference to the tables given will greatly aid in the selection of a suitable Fan.

Single Inlet Single Width Fans are usually selected wherever possible.

When Double Inlet Double Width Fans are used, care should be taken to see that both inlets have the same free area, otherwise the Fan will not operate properly, one half of the impeller delivering more air than the other half.

For double or parallel operation the Cyclone H.S.C.B. is most satisfactory. The corresponding peripheral or tip speeds for this curved back bladed Fan are approximately twice that of the Slow Speed S.S. or curved forward Fan. The outlet velocities for corresponding volumes and pressures (or resistance heads) are the same for both S.S. and H.S.C.B. Fans.

The static pressures (or resistance heads) commonly used for the several typical ventilating installations are:—

#### *For Public Buildings.*

Ventilating only ... ..	... $\frac{3}{8}$ " to $\frac{1}{2}$ " W.G.
Heating and Ventilating ... ..	... $\frac{1}{2}$ " to 1" W.G.
Heating and Ventilating including Air Washer ...	... $\frac{3}{4}$ " to $1\frac{1}{4}$ " W.G.

#### *For Factories or Equivalent.*

Heating ... ..	... $\frac{3}{4}$ " to $1\frac{1}{2}$ " W.G.
Heating and Ventilating, including Air Washer ...	... $1\frac{1}{4}$ " to 2" W.G.

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# CYCLONE

## HOW TO SELECT A CYCLONE FAN FOR SPECIAL CONDITIONS OF TEMPERATURE AND ALTITUDE.

**W**HERE Fans are required to handle hot air or to work at high altitudes the size and full data of the Fan can be obtained from the tables in this Catalogue, and we give below several examples of the method of arriving at the correct figures from the tables.

All the following examples are based on the fan law, *i.e.*, "For a constant capacity and speed, the horse power and pressure vary directly as the barometric pressure, and inversely as the absolute temperature."

How to choose a Fan from the tables, handling air at a temperature higher than 60 degs. F., at which the tables are computed.

*Example.*

Required, an S.S. Type Fan to deliver 30,000 C.F.M. at a temperature of 200 degs. F. and against a resistance head of 1.5" W.G. If the outlet velocity is not to exceed 2,500 feet per minute what will be the size, speed and horse power of the Fan?

The first step is to convert the given conditions to standard list conditions.

Equivalent pressure at 60 degs. F. corresponding }  $= 1.5 \times \left( \frac{460+200}{460+60} \right) = 1.90 \text{ R.H.}$   
to 1.5" R.H. at 200 degs. F.

Therefore, the Fan chosen from the tables to handle 30,000 C.F.M. against 1.90 R.H. will deliver the same volume of air at the same speed against 1.5" R.H. if the temperature is 200 degs. F.

From the tables on page 22 it will be found that a No. 80 Fan will deliver 30,000 C.F.M. against 1.90" R.H. when running at a speed of 290 R.P.M. and taking 14.5 B.H.P. The horse power, however, will be reduced in accordance with the Fan Law given above, *i.e.*,

$$14.5 \times \left( \frac{460+60}{460+200} \right) = 11.4 \text{ B.H.P.}$$

The final data obtained is therefore:—

Size ... ..	No. 80 S.S. Fan
Capacity ... ..	30,000 C.F.M.
Temperature ... ..	200 degs. F.
Resistance Head ... ..	1.5" W.G.
Speed ... ..	290 R.P.M.
Power ... ..	11.4 B.H.P.
Outlet Velocity ... ..	2,180 Ft./min.

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## CYCLONE

### HOW TO SELECT A FAN FROM THE TABLES TO WORK AT ALTITUDES ABOVE SEA LEVEL AT WHICH THE FAN TABLES ARE LISTED.

*Example.*

Required, an S.S. Type Fan to deliver 20,000 C.F.M. against a resistance head of 1.25" W.G. working at an altitude of 5,000 feet and handling air at a temperature of 60 degs. F. the outlet velocity not exceeding 2,000 feet per minute.

The density of air varies inversely as the absolute temperature and directly as the barometric pressure. For easy and quick working a table is printed on page 97 giving the comparative densities of air at different altitudes.

As in the previous example the first step is to convert the given conditions to the list conditions and then use the same Fan Law as example 1.

From the altitude density tables, the density of air at 5,000 feet = 0.826.

Equivalent pressure at sea level corresponding to 1.25" R.H. at 5,000 feet  $= \frac{1.25}{0.826} = 1.515" \text{ R.H.}$

From the Fan Tables on page 20 it will be found that a No. 70 size S.S. Fan will deliver 20,000 C.F.M. against 1.515" R.H. when running at a speed of 292 R.P.M. and taking 7.67 B.H.P.

When handling the lighter air the horse power will be reduced proportionately to the density which  $= 7.67 \times 0.826 = 6.34 \text{ B.H.P.}$

The final data obtained is therefore:—

Size	...	...	...	...	...	No. 70 S.S. Fan
Capacity	...	...	...	...	...	20,000 C.F.M.
Altitude	...	...	...	...	...	5,000 feet
Resistance Head	...	...	...	...	...	1.25" W.G.
Speed	...	...	...	...	...	292 R.P.M.
Power	...	...	...	...	...	6.34 B.H.P.
Outlet Velocity	...	...	...	...	...	1,890 feet per minute

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# CYCLONE

## HOW TO SELECT A FAN WORKING AT OTHER THAN SEA LEVEL AND OTHER THAN STANDARD TEMPERATURE CONDITIONS.

*Example.*

Required an S.S. Type Fan to deliver 15,000 C.F.M. at a temperature of 150 degs. F. against a resistance head of 0.5" W.G. when working at an altitude of 3,000 feet, the outlet velocity not to exceed 1,500 feet per minute.

The first step is to convert the conditions again to standard fan table conditions.

Assuming the density of air at 60 degs. F. = 1 then density at 150 degs. F. equals

$$1 \times \left( \frac{460+60}{460+150} \right) = 0.854$$

From altitude density tables, density of air at 3,000 feet equals 0.891.

The air density for both temperature and altitude conditions equals:—

$$0.854 \times 0.891 = 0.760$$

The equivalent pressure at 60 degs. F. and sea level equals:—

$$\frac{0.5}{0.760} = 0.658 \text{ R.H.}$$

From the Fan Tables on page 19 it will be found that a No. 70 S.S. Fan will deliver 15,000 C.F.M. against a resistance head of 0.658" W.G. when running at a speed of 198 R.P.M. and taking 2.73 B.H.P.

The actual horse power will be reduced proportionately to the density of the air.

$$\therefore 2.73 \times 0.760 = 2.07$$

The final data obtained is therefore:—

Size ...	...	...	...	...	...	No. 70 S.S. Fan
Capacity ...	...	...	...	...	...	15,000 C.F.M.
Temperature ...	...	...	...	...	...	150 degs. F.
Altitude ...	...	...	...	...	...	3,000 feet
Speed ...	...	...	...	...	...	198 R.P.M.
Power ...	...	...	...	...	...	2.07 B.H.P.
Outlet Velocity ...	...	...	...	...	...	1,415 feet per minute

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# CYCLONE

## ALTITUDE-DENSITY TABLE FOR AIR

Altitudes in feet—Standard air at 0 alt. (29.92 in. Bar.)=1.

Alt.	Den.	Bar.	Alt.	Den.	Bar.	Alt.	Den.	Bar.	Alt.	Den.	Bar.
0	1.00	29.92	1500	.944	28.26	3000	.891	26.68	6000	.795	23.79
100	.966	29.81	1600	.941	28.15	3200	.885	26.48	6200	.789	23.61
200	.992	29.70	1700	.937	28.04	3400	.878	26.28	6400	.784	23.43
300	.989	29.58	1800	.933	27.93	3600	.872	26.08	6600	.778	23.26
400	.985	29.47	1900	.930	27.83	3800	.865	25.88	6800	.772	23.08
500	.981	29.36	2000	.926	27.72	4000	.858	25.68	7000	.766	22.90
600	.977	29.25	2100	.923	27.62	4200	.852	25.49	7200	.760	22.73
700	.974	29.14	2200	.919	27.51	4400	.846	25.30	7400	.754	22.56
800	.970	29.02	2300	.916	27.41	4600	.839	25.10	7600	.748	22.38
900	.966	28.91	2400	.912	27.30	4800	.833	24.91	7800	.743	22.21
1000	.962	28.80	2500	.909	27.20	5000	.826	24.72	8000	.737	22.04
1100	.959	28.69	2600	.905	27.09	5200	.820	24.53	8200	.731	21.87
1200	.955	28.58	2700	.902	26.99	5400	.814	24.35	8400	.726	21.70
1300	.952	28.47	2800	.898	26.89	5600	.808	24.16	8600	.720	21.54
1400	.948	28.36	2900	.895	26.78	5800	.802	23.98	8800	.714	21.37



## CYCLONE

### LAWS APPLYING TO FANS

Of the natural laws applying to all types of fans under list conditions the three following are of first importance:—

- (1) The air capacity varies as the fan speed.
- (2) The pressure varies as the square of fan speed.
- (3) The horse power varies as the cube of fan speed.

*Example.*

A No. 70 S.S. Cyclone Fan delivers 20,000 C.F.M. against a resistance head of 1" W.G. when running at a speed of 248 R.P.M., the power absorbed being 5.65 B.H.P.

If it is required to increase the volume to 25,000 C.F.M. what will be the speed, resistance head and power?

Using Law (1)

$$\text{Speed} = 248 \times \frac{25,000}{20,000} = 310 \text{ R.P.M.}$$

Using Law (2)

$$\text{Resistance head} = 1 \times \left(\frac{310}{248}\right)^2 = 1.56 \text{ inches}$$

Using Law (3)

$$\text{Horse power} = 5.65 \times \left(\frac{310}{248}\right)^3 = 11.0$$

To find Fan Efficiencies for static and total pressures.

$$\text{Static Efficiency} = \frac{\text{C.F.M.} \times \text{Static pressure in inches W.G.}}{6356 \times \text{Fan H.P.}}$$

$$\text{Total or Mechanical Efficiency} = \frac{\text{C.F.M.} \times \text{Total pressure in inches W.G.}}{6356 \times \text{Fan H.P.}}$$

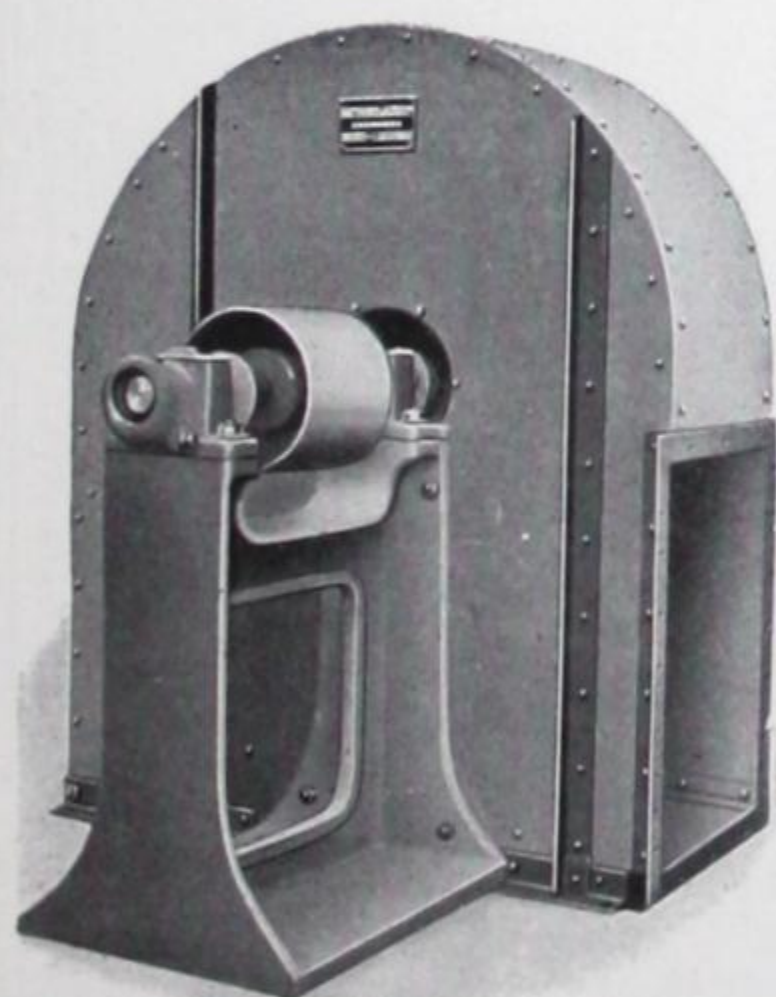
MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



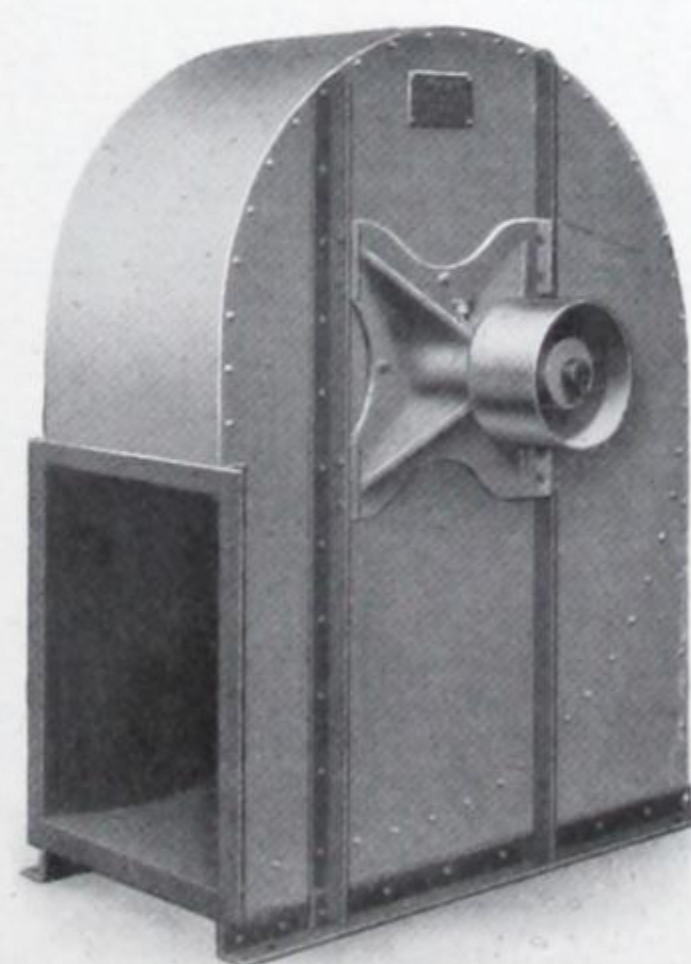
**CYCLONE**

**P·B**  
FANS

# P B ADDLE LADE FANS



Heavy Pattern  
with Ring Oiling Bearings.



Light Pattern  
with Ball Bearings.

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## CYCLONE

**T**HE Cyclone Paddle Blade Fan has many uses for which the Multivane Fan is unsuitable. It is unrivalled in the collection of refuse from wood-working machines in joinery works; in dust and smoke exhausting plants, and wherever solid matter is passed through the Fan.

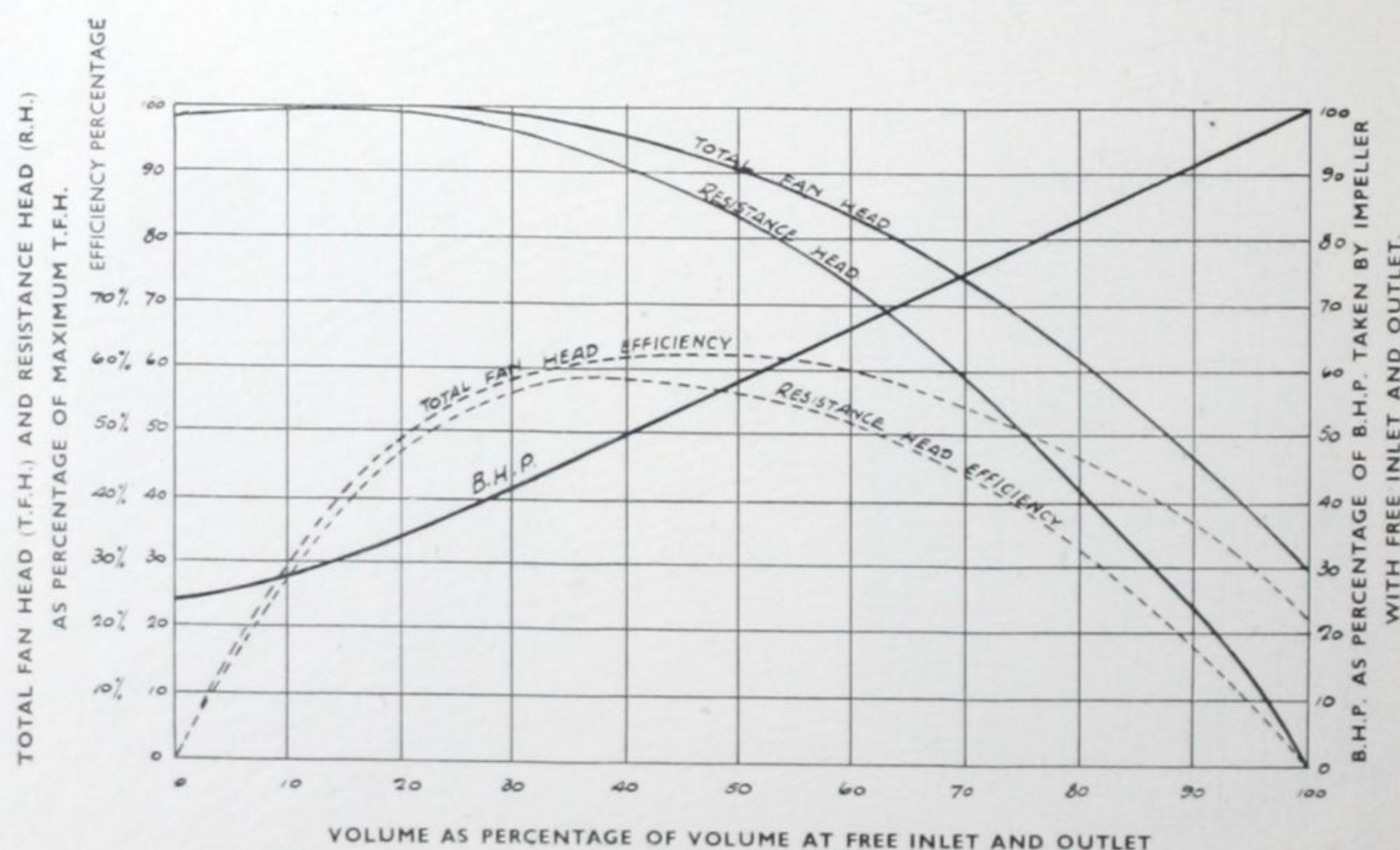
When fitted with water-cooled bearings it is excellent for induced draught for boilers.

The Heavy Pattern types are built of strong steel plate heavily stayed with substantial tees and angles. They are fitted with self-lubricating ring oiling bearings having heavy gun-metal bushes, steel shafts, and perfectly balanced pulleys and runners.

The Light Pattern types have fitted to the reinforced fan side a strong cast-iron bracket which houses the ball bearings. They are suitable for duties up to 3" water gauge.

When these Steel Plate Fans are used to discharge air through trunking with free inlet, that is as Blowers, they should be fitted with a taper inlet piece; and when used as Exhausters sucking air through trunking and discharging freely to atmosphere they should be provided with an evase outlet: by so doing considerable saving in power is effected.

These and many other points in application need careful attention to obtain the best results.



Characteristic Curves derived from tests upon "Cyclone" Paddle Blade Centrifugal Fan with Standard impeller, running at constant speed.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**

**PADDLE-BL**  
STANDARD A  
BAROMETRIC

Fan Size	Outlet Velocity ft. per min.
4	1455
5	914

Fan Size	Outlet Velocity ft. per min.
4	1745
5	1096

Fan Size	Outlet Velocity ft. per min.
4	2040
5	1280

Fan Size	Outlet Velocity ft. per min.
4	2330
5	1460
6	1022

Fan Size	Outlet Velocity ft. per min.
4	2620
5	1644
6	1150

Fan Size	Outlet Velocity ft. per min.
4	2915
5	1830
6	1280

**MATTHEW**



## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

### 500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	1455	·1325	1317	·15	1545	·21	1728	·27	1910	·34	2060	·41	2220	·49	2360	·56	2490	·65	2620	·73	2860	·93								
5	914	·0522	965	·135																										

### 600 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	1745	·1905	1406	·2	1607	·27	1780	·34	1953	·41	2105	·49	2260	·57	2400	·65	2525	·75	2655	·84	2880	1·1								
5	1096	·075	990	·17	1180	·25	1344	·33																						

### 700 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	2040	·26	1503	·25	1700	·33	1860	·42	2020	·5	2165	·59	2300	·68	2445	·76	2575	·85	2700	·95	2915	1·2								
5	1280	·1025	1020	·2	1200	·29	1366	·38																						

### 800 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	2330	·34	1600	·33	1775	·41	1940	·51	2090	·6	2240	·69	2375	·79	2490	·89	2620	1·0	2740	1·1	2965	1·3								
5	1460	·1335	1063	·24	1238	·34	1386	·44																						
6	1022	·0655	815	·22																										

### 900 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	2620	·43	1720	·41	1890	·51	2035	·6	2180	·71	2300	·81	2450	·92	2570	1·1	2680	1·2	2790	1·3	3000	1·5								
5	1644	·169	1104	·29	1270	·39	1415	·5	1550	·61																				
6	1150	·083	830	·25																										

### 1,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	2915	·532	1840	·53	1993	·62	2130	·72	2270	·83	2400	·95	2520	1·06	2638	1·19	2755	1·29	2860	1·43	3075	1·7								
5	1830	·21	1155	·34	1310	·45	1460	·57	1580	·7	1700	·82	1820	·95	1930	1·09	2030	1·22	2130	1·38	2330	1·67								
6	1280	·103	852	·28	1000	·41	1138	·55	1253	·69																				



# P·B FANS

# CYCLONE

## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

1,250 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	3640	·83	2145	·88	2270	1·0	2400	1·11	2520	1·25	2640	1·4	2750	1·53	2860	1·68	2970	1·8	3065	1·96										
5	2285	·327	1290	·51	1422	·64	1550	·79	1670	·93	1793	1·07	1900	1·23	1990	1·38	2095	1·55	2190	1·7	2375	2·03	2535	2·37	2690	2·75	2850	3·13	2990	3·55
6	1600	·16	910	·39	1050	·54	1170	·69	1290	·85	1393	1·02																		

1,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4	4370	1·19			2585	1·55	2700	1·7	2820	1·85	2910	1·95	3015	2·11																
5	2740	·47	1428	·74	1555	·89	1670	1·05	1780	1·23	1890	1·4	1990	1·57	2084	1·75	2200	1·95	2270	2·1	2430	2·5	2590	2·85	2750	3·3	2895	3·7	3030	4·1
6	1920	·23	980	·53	1106	·7	1220	·86	1328	1·04	1435	1·25	1525	1·42																
7	1370	·1175	750	·44	872	·62																								

1,750 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5	3200	·64	1585	1·06	1700	1·21	1800	1·38	1900	1·72	2000	1·8	2095	1·96	2186	2·2	2285	2·4	2365	2·6	2530	3·0	2670	3·5	2815	3·86	2955	4·3	3100	4·75
6	2240	·314	1050	·68	1170	·88	1270	1·08	1383	1·4	1480	1·5	1570	1·72	1656	1·93	1730	2·15	1820	2·37										
7	1600	·16	790	·55	907	·75	1010	·96																						

2,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP		RPM BHP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5	3660	·84			1850	1·7	1948	1·82	2035	2·01	2130	2·24	2205	2·45	2306	2·73	2390	2·94	2475	3·14	2620	3·6	2780	4·1	2910	4·6	3040	5·05	3160	5·5
6	2560	·41	1143	·9	1242	1·15	1345	1·32	1440	1·57	1536	1·8	1620	2·04	1706	2·29	1780	2·52	1857	2·75	2000	3·25	2140	3·8	2280	4·35	2390	4·88	2510	5·5
7	1828	·209	830	·69	943	·91	1047	1·14	1138	1·4	1220	1·65	1300	1·9	1380	2·17	1450	2·44												
8	1412	·125	659	·6																										

2,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5	4575	1·31							2350	3·33	2425	3·6	2490	3·8	2560	4·0	2640	4·3	2705	4·6	2840	5·2	2990	5·75	3200	6·3				
6	3200	·64			1412	1·71	1500	1·96	1590	2·23	1663	2·54	1747	2·8	1820	3·1	1890	3·4	1960	3·7	2100	4·3	2225	4·9	2350	5·5	2455	6·15	2565	6·8
7	2280	·325	930	1·03	1030	1·31	1118	1·57	1200	1·87	1280	2·14	1366	2·48	1430	2·8	1503	3·1	1565	3·4	1700	4·1	1820	4·75						
8	1766	·195	715	·84	813	1·11	903	1·41	985	1·72																				
9	1405	·1235	583	·73	680	1·05																								

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

3,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5	5480	1.88											2800	5.7	2864	6.0	2905	6.2	2970	6.4	3110	7.1	3220	7.75						
6	3840	.922			1587	2.62	1670	2.9	1743	3.15	1818	3.54	1890	3.8	1960	4.2	2020	4.5	2085	4.8	2205	5.6	2330	6.2	2440	6.85	2555	7.65	2655	8.35
7	2740	.47	1035	1.52	1120	1.8	1202	2.12	1283	2.45	1355	2.83	1428	3.2	1500	3.5	1570	3.85	1630	4.25	1742	5.0	1850	5.7	1965	6.5				
8	2120	.282	777	1.15	863	1.47	950	1.81	1028	2.16	1105	2.55	1166	2.9	1230	3.3	1297	3.65	1357	4.1										
9	1685	.178	622	.97	715	1.31	792	1.67	865	2.05																				
10	1435	.129	522	.88																										

3,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6	4480	1.26							1910	4.5	1980	4.75	2050	5.15	2100	5.45	2175	5.9	2235	6.25	2345	7.0	2465	7.9	2550	8.7	2660	9.5	2765	10.2
7	3200	.64			1230	2.5	1300	2.82	1380	3.2	1445	3.65	1510	4.0	1580	4.4	1632	4.76	1700	5.2	1812	6.0	1918	6.9	2020	7.8	2115	8.7	2215	9.5
8	2475	.383	845	1.53	927	1.9	1000	2.3	1072	2.7	1142	3.15	1210	3.5	1276	4.0	1335	4.4	1390	4.82										
9	1970	.243	663	1.25	747	1.65	824	2.04	895	2.5																				
10	1600	.16	547	1.1	635	1.5																								

4,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6	5120	1.64									2150	6.5	2225	6.9	2274	7.2	2330	7.6	2375	7.9	2485	7.9	2590	9.8	2700	10.6	2800	11.6	2880	12.5
7	3650	.835					1413	3.75	1478	4.15	1540	4.6	1606	5.0	1660	5.5	1718	5.9	1780	6.35	1885	7.3	1984	8.15	2090	9.2	2190	10.2	2275	11.1
8	2825	.5	920	2.09	995	2.5	1065	2.86	1130	3.3	1197	3.78	1260	4.3	1316	4.75	1376	5.15	1430	5.7										
9	2245	.316	708	1.57	786	2.05	858	2.5	927	2.96																				
10	1827	.208	574	1.34	654	1.8																								

4,500 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6	5750	2.07															2500	9.8	2560	10.1	2655	11.2	2750	12.0	2840	12.85	2940	14.2	3020	15.0
7	4115	1.06							1580	5.37	1645	5.75	1703	6.3	1760	6.75	1810	7.25	1870	7.8	1960	8.65	2065	9.8	2150	10.75	2250	11.75	2340	12.9
8	3180	.632			1065	3.15	1128	3.6	1195	4.05	1260	4.6	1310	5.05	1366	5.6	1426	6.2	1504	6.9	1590	7.75	1678	8.85	1760	10.0	1850	11.1	1930	12.2
9	2530	.402	763	2.02	832	2.5	900	3.01	960	3.5	1023	4.05	1085	4.55	1136	5.1	1187	5.65	1237	6.2	1335	7.35	1430	8.55						
10	2055	.264	608	1.65	686	2.2	752	2.67	813	3.25																				
11	1708	.183	509	1.45	584	2.0																								



# P·B FANS

## CYCLONE

### PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

5,000 C.F.M.

### PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6	6400	2.56															2670	12.4	2720	13.1	2825	13.65	2900	14.7	3000	15.7	3080	16.9	3170	17.9
7	4570	1.3							1690	6.77	1750	7.25	1795	7.53	1860	8.27	1908	8.83	1955	9.25	2060	10.5	2140	11.5	2230	12.55	2310	13.6	2400	15.0
8	3530	.78			1138	4.0	1200	4.42	1258	4.95	1315	5.48	1375	6.1	1434	6.62	1482	7.2	1524	7.85	1616	8.9	1720	10.1	1800	11.2	1890	12.5	1970	13.8
9	2810	.494	810	2.57	875	3.02	946	3.57	1007	4.14	1062	4.72	1112	5.3	1166	5.82	1220	6.43	1270	7.08	1363	8.27	1450	9.6	1530	10.83	1615	12.2	1700	13.5
10	2285	.327	640	2.01	712	2.56	777	3.14	835	3.67	898	4.28	950	4.91	996	5.52	1050	6.15	1083	6.77	1182	8.13	1263	9.5						
11	1897	.225	532	1.73	600	2.27	666	2.85	725	3.48	780	4.13	830	4.75	882	5.42	932	6.1												
12	1600	.16	455	1.55	525	2.14	586	2.76	644	3.39	700	4.07																		
13	1368	.117	398	1.43	468	2.07	528	2.71																						
14	1163	.085	358	1.38	425	2.03																								

6,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6	7680	3.7															2120	12.85	2160	13.1	2240	14.5	2325	15.7	2415	17.2	2490	18.5	2580	19.8
7	5480	1.88							1405	7.25	1453	7.75	1495	8.35	1556	9.0	1600	9.65	1643	10.45	1735	11.8	1815	13.2	1900	14.5	1973	16.0	2060	17.25
8	4240	1.125			980	4.5	1035	5.03	1090	5.62	1145	6.35	1193	6.95	1244	7.7	1293	8.5	1334	9.05	1425	10.5	1510	12.0	1583	13.4	1660	14.9	1735	16.4
9	3370	.71							893	4.9	943	5.55	1010	6.5	1044	6.92	1088	7.75	1130	8.42	1216	10.0	1297	11.4						
10	2740	.47	715	2.94	780	3.54	837	4.2	893	4.9	943	5.55	1010	6.5	1044	6.92	1088	7.75	1130	8.42	1216	10.0	1297	11.4						
11	2280	.325	578	2.36	645	3.07	703	3.74	760	4.45	813	5.15	860	5.9	906	6.6	950	7.4												
12	1920	.23	490	2.09	553	2.75	610	3.43	663	4.18	718	4.97																		
13	1640	.168	423	1.89	488	2.57	542	3.3																						
14	1395	.122	375	1.75	436	2.48																								

7,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7	6400	2.56																			2460	20.0	2540	21.4	2600	22.6	2685	24.1	2760	25.6
8	4950	1.53									1593	11.0	1665	11.8	1690	12.2	1740	13.0	1780	13.75	1850	15.3	1930	16.9	2005	18.3	2080	20.0	2170	21.6
9	3930	.965					1138	7.1	1180	7.7	1232	8.4	1280	9.2	1328	10.0	1370	10.75	1410	11.5	1490	13.2	1570	14.7	1650	16.3	1728	18.0	1790	19.7
10	3200	.64	791	4.25	853	4.85	905	5.7	950	6.25	1000	7.1	1047	8.0	1096	8.8	1142	9.5	1178	10.4	1263	12.0	1330	13.6	1410	15.5	1470	17.1	1542	19.0
11	2660	.443	637	3.35	697	4.05	748	4.8	800	5.6	850	6.4	894	7.25	942	8.0	982	8.9	1020	9.75	1100	11.5								
12	2240	.314	525	2.75	585	3.5	640	4.0	690	5.1	740	6.0	785	6.85																
13	1915	.229	452	2.45	508	3.2	563	4.0																						
14	1627	.166	394	2.2	453	3.0																								

8,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7	7300	3.33																												
8	5650	2.0													1840	16.75	1880	17.4	1916	18.0	1993	19.8	2060	21.4	2125	22.8	2200	25.2	2270	26.5
9	4490	1.26							1290	10.5	1340	11.1	1374	11.75	1416	12.6	1460	13.5	1493	14.25	1575	16.25	1645	18.0	1715	20.0	1786	21.75	1850	23.7
10	3655	.835			927	6.75	970	7.3	1019	8.1	1067	8.9	1112	10.0	1154	10.7	1190	11.8	1238	12.6	1306	14.4	1390	16.3	1450	18.25	1528	20.2	1580	22.0
11	3030	.574	694	4.5	750	5.25	808	6.0	845	7.0	890	7.85	933	8.8	976	9.7	1016	10.7	1058	11.6	1128	13.5	1200	15.5	1260	17.3	1337	19.5	1397	21.7
12	2560	.41	570	3.6	620	4.4	677	5.35	725	6.3	767	7.2	813	8.15	852	9.1	890	10.0	930	11.0										
13	2185	.298	481	3.1	535	4.0	586	4.85	635	5.85	680	6.8	720	7.8																
14	1860	.217	415	2.75	472	3.65																								

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**P·B**  
FANS

## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**9,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8	6350	2.525																												
9	5050	1.595																												
10	4115	1.06																												
11	3415	.73																												
12	2875	.517																												
13	2460	.378	512	3.85	565	4.9	610	5.9	655	6.9	700	7.85	740	8.9	780	10.1														
14	2090	.273	440	3.3	492	4.4	538	5.4																						
16	1586	.1575	342	2.8	397	3.9																								

**10,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8	7075	3.13																												
9	5620	1.97																												
10	4575	1.31																												
11	3795	.9																												
12	3200	.64	653	5.82	700	6.74	750	7.85	795	8.93	831	10.0	872	11.42	910	12.3	945	13.6	978	14.55	1050	16.8	1110	19.3	1170	21.7	1230	24.4	1285	27.1
13	2735	.4675	546	4.9	592	5.74	640	6.98	682	8.02	720	9.24	763	10.38	800	11.6														
14	2325	.3375	463	4.13	510	5.12	558	6.28	602	7.4	642	8.72																		
16	1764	.1945	357	3.34	405	4.45	450	5.61	498	6.9																				

**11,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9	6180	2.39																												
10	5025	1.58																												
11	4175	1.09																												
12	3520	.777																												
13	3010	.567	580	5.95	627	7.0	670	8.14	710	9.4	748	10.58	785	11.85	810	13.18	857	14.4	894	15.7	953	18.55	1018	21.2	1070	23.8	1122	26.8		
14	2560	.41	490	4.94	537	6.03	580	7.35	620	8.64	660	9.78	697	11.0	732	12.6	764	13.65												
16	1940	.235	372	3.84	419	5.2	462	6.28	503	7.64	540	9.1																		
18	1545	.1495	281	3.39																										

**12,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10	5490	1.89																												
11	4560	1.3																												
12	3840	.92																												
13	3290	.678																												
14	2793	.488	519	6.1	560	7.25	600	8.5	647	10.0	679	11.3	715	12.7	750	14.0	785	15.4	816	17.0	875	19.8	930	22.7						
16	2120	.282	387	4.5	433	5.9	475	7.25	515	8.65	550	10.1	583	11.6																
18	1685	.178	311	3.85	358	5.25																								

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



**PADDLE-BLADE FANS**

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**13,000 C.F.M.**

**PERFORMANCE TABLES**

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10	5950	2.22																												
11	4940	1.53																												
12	4160	1.08																												
13	3560	.79																												
14	3020	.57	545	7.3	588	8.5	630	9.9	670	11.4	702	12.75	733	14.3	768	15.7	800	17.4	832	18.75	892	21.9	940	25.1	1000	28.4	1047	31.7	1093	35.2
16	2295	.33	403	5.25	447	6.75	490	8.2	527	9.75	560	11.2	597	12.8	626	14.3	658	16.2	685	17.6										
18	1825	.208	320	4.35	365	5.9	403	7.5	440	9.0	472	10.6																		

**14,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10	6400	2.57																												
11	5315	1.77																												
12	4475	1.25																												
13	3830	.917																												
14	3255	.663	572	8.44	614	10.0	652	11.28	693	12.8	720	14.38	755	16.05	786	17.6	815	19.0	848	20.79	908	24.0	956	27.5	1012	30.9	1056	34.1	1108	37.9
16	2470	.382	399	6.1	462	7.68	502	9.16	536	10.8	572	12.45	606	14.0	637	15.7	667	17.35	696	19.6	750	22.7	800	26.55						
18	1965	.242	331	5.0	373	6.6	413	8.15	448	9.82	479	11.6	510	13.29	542	15.15	573	17.0												
20	1600	.16	274	4.4	316	6.0	352	7.72	386	9.48																				

**15,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10	6855	2.94																												
11	5690	2.03																												
12	4800	1.44																												
13	4100	1.05																												
14	3490	.762																												
16	2650	.44	443	7.14	478	8.65	515	10.25	553	12.0	585	13.6	620	15.4	647	17.12	678	19.0	705	21.0										
18	2105	.2775	338	5.54	382	7.3	421	9.0	456	10.8	490	12.5	515	14.2																
20	1715	.184	280	4.81	322	6.6	358	8.35	398	10.15																				

**16,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11	6075	2.31																												
12	5120	1.64																												
13	4380	1.2																												
14	3720	.865																												
16	2820	.498	460	8.4	498	10.0	532	11.4	568	13.4	598	15.1	630	17.1	660	19.0	688	20.6	718	22.7										
18	2245	.315	354	6.3	393	8.1	430	10.1	463	11.9	500	13.7	524	15.6	554	17.6	579	19.75												
20	1830	.21	289	5.4	327	7.2	363	9.2	396	11.1																				
22	1518	.144	245	4.9																										



# CYCLONE

**P·B**  
FANS

## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**17,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11	6450	2.6																												
12	5440	1.85																												
13	4650	1.35																												
14	3955	.98																												
16	3000	.563																												
18	2390	.3575	366	7.2	405	8.9	438	10.9	471	12.7	505	14.75	531	16.9	561	18.9	586	20.7	612	23.0										
20	1942	.2365	295	5.95	334	7.95	371	9.9	400	11.8																				
22	1613	.163	248	5.3	287	7.28																								

**18,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12	5763	2.08																												
13	4925	1.515																												
14	4180	1.095																												
16	3180	.632	494	10.5	535	12.5	565	14.3	597	16.1	628	18.8	659	20.2	684	22.6	712	24.5	736	26.2	800	30.9	837	35.4	880	39.7	924	43.9	962	48.8
18	2530	.4	378	8.1	416	10.0	450	11.9	482	14.3	513	16.0	534	17.9	568	20.6	594	22.5	619	24.8	664	29.25	715	34.2						
20	2055	.264	305	6.6	341	8.65	379	10.7																						
22	1708	.1825	254	5.8																										

**19,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12	6080	2.32																												
13	5200	1.69																												
14	4420	1.22																												
16	3355	.704																												
18	2670	.447	392	9.1	427	10.9	463	13.1	492	15.25	520	17.6	550	19.7	576	21.7	603	24.2	625	26.6	670	31.1	720	36.0	761	41.2				
20	2170	.295	312	7.3	350	9.5	382	11.6	413	13.7	443	16.1	468	18.5	494	20.8	520	23.2												
22	1803	.203	260	6.3	296	8.6																								

**20,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13	5475	1.875																												
14	4650	1.35																												
16	3530	.78																												
18	2808	.494	405	10.3	440	12.1	472	14.25	502	16.5	528	18.8	562	21.4	584	23.3	610	25.7	635	28.3	682	33.1	725	38.3	766	43.5				
20	2285	.327	324	8.2	355	10.25	390	12.6	418	14.8	448	17.1	475	19.7	500	22.0	524	24.6	548	27.1										
22	1900	.226	266	6.9	300	9.15																								

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# P·B FANS

# CYCLONE

## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

21,000 C.F.M.

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12	6725	2.825																											1640	77.6
13	5750	2.07																			1215	50.8	1265	55.0	1300	60.0	1350	66.0	1395	69.4
14	4880	1.43																			1050	45.0	1080	48.7	1140	55.0	1180	59.4	1240	64.6
16	3707	.86			588	17.7	623	20.0	650	21.7	675	24.1	704	26.25	730	28.7	752	31.0	780	33.7	824	38.0	870	42.0	914	47.9	957	53.0	993	57.8
18	2950	.545	414	11.4	448	13.0	483	15.5	513	18.0	541	20.2	567	22.6	592	24.9	620	27.5	644	30.0	686	35.0	733	40.6	775	45.5	814	51.2		
20	2400	.36	329	8.7	364	11.0	396	13.5	424	15.9	453	18.3	481	21.0	504	23.4	528	26.0	550	28.5	598	34.1								
22	1993	.249	272	7.5	305	9.9	338	12.25	367	14.7	393	17.4	419	19.9	444	22.7														

22,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13	6020	2.27																											1422	76.0
14	5120	1.64																			1078	49.4	1115	53.8	1160	59.0	1200	63.5	1246	69.2
16	3880	.94																			840	41.5	882	46.1	928	51.2	972	56.5	1010	62.3
18	3090	.598			463	14.6	492	16.9	523	19.4	550	21.9	577	24.5	602	27.1	628	29.6	650	32.0	695	37.0	740	42.8	775	48.0	816	53.7	853	59.7
20	2515	.395	340	9.75	374	12.1	403	14.6	432	16.9	460	19.6	485	22.0	510	24.7	534	27.5	557	30.3	600	35.8								
22	2085	.272	278	8.2	313	10.6	342	13.0	373	15.7																				
24	1760	.194	236	7.2	270	9.8																								

23,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13	6300	2.48																											1450	81.25
14	5350	1.79																			1100	53.5	1138	57.5	1182	63.5	1228	68.3	1265	73.8
16	4060	1.03																			858	44.25	895	49.6	937	54.5	978	59.7	1018	65.8
18	3230	.652			477	16.5	507	18.5	535	21.0	563	23.8	588	26.3	610	29.0	637	31.6	662	34.5	706	39.5	750	45.2	783	50.8	822	56.5	860	62.3
20	2630	.4425	350	11.0	382	13.1	410	15.7	440	18.25	468	20.8	492	23.4	518	26.3	543	29.3	563	32.0	603	37.7								
22	2180	.2975	284	8.8	318	11.4	346	13.9	375	16.6	402	19.5	427	22.4																
24	1840	.212	240	7.8	273	10.3																								

24,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13	6570	2.7																											1440	82.8
14	5580	1.95																			1120	57.25	1165	62.8	1208	68.5	1245	73.75	1288	79.5
16	4230	1.12																			868	47.2	910	52.8	953	58.5	990	64.0	1030	69.2
18	3370	.71			492	18.0	520	20.1	544	22.7	573	25.4	595	28.1	622	30.8	644	33.6	668	36.2	713	41.8	750	47.5	792	53.4	830	59.5	867	65.5
20	2745	.472	360	11.8	390	14.1	418	16.75	446	19.6	473	22.4	498	25.0	522	27.7	545	30.9	570	33.6	610	39.7								
22	2275	.323	291	9.6	322	12.2	352	15.1	380	17.8	410	20.6	430	23.6																
24	1920	.23	245	8.4	276	11.0	308	13.8	332	16.7																				
26	1640	.168	212	7.6																										

MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

**P·B**  
FANS

## PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

**25,000 C.F.M.**

## PERFORMANCE TABLES

SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13	6840	2.925																									1470	88.4	1505	93.5
14	5820	2.12																	1100	56.8	1148	62.0	1182	67.0	1257	72.2	1270	78.5	1310	84.5
16	4420	1.22									744	33.7	765	36.7	794	39.2	816	41.5	835	43.2	880	50.2	926	56.1	964	62.3	1000	67.3	1037	71.4
18	3510	.77			494	19.3	528	21.8	558	24.5	583	27.1	602	30.2	632	32.7	653	35.7	678	38.5	721	44.2	763	50.0	803	56.1	835	62.0	872	67.7
20	2855	.51	367	13.1	398	15.3	425	17.9	453	20.6	478	24.6	496	26.5	526	29.1	550	32.1	572	35.4	613	41.0	660	47.4						
22	2370	.352	298	10.4	328	13.1	357	15.9	383	18.7	410	21.8	430	24.6	456	27.6	479	30.4												
24	2000	.25	249	8.9	282	11.8	310	14.6	337	17.5																				
26	1710	.183	215	8.1	250	10.8																								

**26,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14	6500	2.64															1120	61.3	1143	63.8	1178	68.2	1236	73.4	1260	77.9	1290	83.5	1360	90.6
16	4590	1.32							736	35.2	763	37.2	786	39.7	808	41.8	832	44.8	854	47.5	900	54.5	936	59.6	979	65.4	1011	72.1	1050	77.0
18	3652	.79			517	21.9	544	23.4	565	26.2	593	28.8	617	31.8	640	34.8	670	38.3	687	40.8	727	46.7	770	53.0	806	59.5	843	65.6	883	72.3
20	2972	.552	374	14.1	408	16.6	436	19.2	462	22.8	488	25.0	508	28.0	532	30.8	560	34.7	580	37.2	620	43.8	659	50.2	696	56.4	729	63.4	765	70.4
22	2468	.382	304	11.1	334	13.9	363	16.7	389	20.0	414	22.7	440	26.0	462	29.2	486	32.3	505	35.5	544	42.2								
24	2080	.27	255	9.6	285	12.5	316	15.6	340	18.6	362	21.7	387	25.1	408	28.2	433	31.7												
26	1779	.198	218	8.5																										

**27,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14	6280	2.47																							1276	84.8	1314	89.8	1350	96.5
16	4770	1.42											806	42.4	826	45.2	850	49.0	872	51.0	915	57.8	954	63.25	993	69.25	1029	76.4	1062	81.5
18	3790	.9			527	23.1	556	26.1	580	28.3	605	31.8	629	34.6	652	37.7	675	40.2	698	43.3	738	49.9	778	56.0	818	61.6	852	68.2	885	75.0
20	3090	.597	388	15.15	394	18.15	444	20.63	470	23.6	495	26.8	517	29.7	540	32.6	565	36.0	586	39.3	628	46.3	666	52.2	698	59.0	735	65.8	768	73.1
22	2560	.41	312	12.1	342	14.95	369	17.9	396	21.2	420	24.0	444	27.0	466	30.8	486	33.5	508	37.2	549	43.9	584	51.25						
24	2160	.292	259	10.1	289	13.25	317	16.3	343	19.3	367	22.7	389	26.25	410	29.2	433	32.9												
26	1847	.213	222	9.04	238	12.1	279	15.6	308	18.6																				

**28,000 C.F.M.**

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14	6515	2.65																							1305	90.0	1341	96.5	1380	103.5
16	4940	1.53																	888	55.0	926	61.4	968	68.5	1010	74.0	1041	79.1	1076	86.3
18	3933	.967					570	28.4	592	30.6	616	33.8	640	36.7	662	40.0	685	43.0	705	45.8	748	52.8	785	58.6	826	65.0	861	72.0	899	78.6
20	3200	.64	395	16.3	425	19.4	453	22.0	475	25.0	502	28.7	524	31.4	548	35.2	572	38.0	590	40.6	635	48.0	670	55.0	704	61.6	738	68.2	775	76.0
22	2655	.442	318	13.3	347	16.2	375	19.5	398	22.0	426	25.9	449	29.0	472	32.0	492	35.3	513	38.8	554	46.0	588	53.0						
24	2240	.314	262	11.0	293	14.0	318	17.3	348	20.4	371	24.0	393	27.3	414	30.6	435	34.0												
26	1914	.229	225	9.8	255	12.7																								

**MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# P.B FANS

## CYCLONE

### PADDLE-BLADE FANS

STANDARD AIR 60° F. 70% REL. HUM.  
BAROMETRIC PRESSURE 30" Hg.

29,000 C.F.M.

### PERFORMANCE TABLES

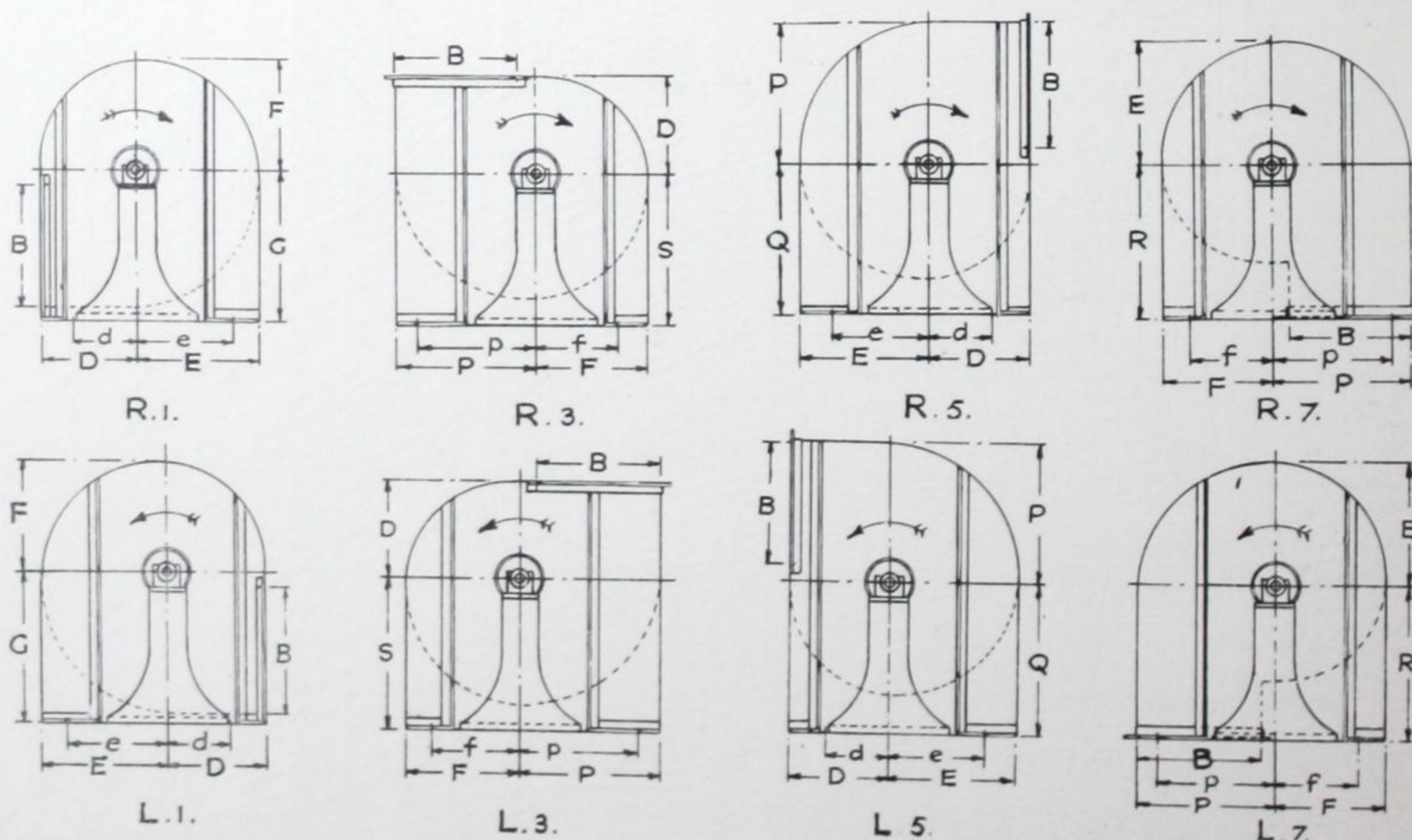
SINGLE INLET  
SINGLE WIDTH FANS

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14	6750	2.85																												
16	5120	1.64																			943	65.0	985	71.5	1020	78.5	1052	84.5	1193	91.0
18	4073	1.039							605	33.0	632	36.5	650	39.0	686	43.4	695	45.6	714	48.5	757	55.25	797	62.5	832	69.0	870	75.5	905	83.0
20	3314	.688			436	21.3	463	24.0	485	27.1	510	30.4	533	33.2	554	37.0	575	40.25	595	43.5	637	50.0	677	57.5	713	64.5	745	72.0	775	78.5
22	2750	.473	325	14.5	354	17.1	380	20.2	405	23.5	430	27.0	453	30.1	474	33.5	497	37.0	512	40.5	553	48.0								
24	2320	.337	268	11.7	299	15.0	325	18.2	350	21.5	374	24.8	397	28.5																
26	1980	.245	229	10.25	258	13.7																								
28	1686	.178	200	9.3																										

30,000 C.F.M.

Fan Size	Outlet Velocity ft. per min.	Velocity Head inches W.G.	1" RH		1½" RH		2" RH		2½" RH		3" RH		3½" RH		4" RH		4½" RH		5" RH		6" RH		7" RH		8" RH		9" RH		10" RH		
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
14	6977	3.04																												1423	116.5
16	5300	1.755																			960	69.0	1000	75.0	1038	84.0	1078	90.5	1106	96.5	
18	4215	1.11											662	41.5	684	45.0	710	48.5	732	52.5	767	58.5	807	66.0	840	72.5	875	78.5	910	86.0	
20	3430	.736			443	22.75	471	25.5	495	29.0	518	32.5	540	35.5	562	39.0	583	42.5	604	46.0	644	52.5	693	61.0	713	67.0	748	74.5	770	82.0	
22	2847	.508	332	15.5	360	18.4	388	21.5	413	25.0	437	28.5	458	32.0	478	35.0	500	38.6	520	42.5	556	50.0	592	57.5	628	65.0					
24	2400	.36	274	12.6	303	15.7	331	19.5	354	22.6	378	26.0	399	29.5																	
26	2050	.263	233	10.8	261	14.2	287	18.0																							
28	1743	.19	203	9.9																											

### DIAGRAMS SHEWING DIRECTIONS OF ROTATION AND ANGLES OF DISCHARGE.



MATTHEWS & YATES LIMITED, ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



# CYCLONE

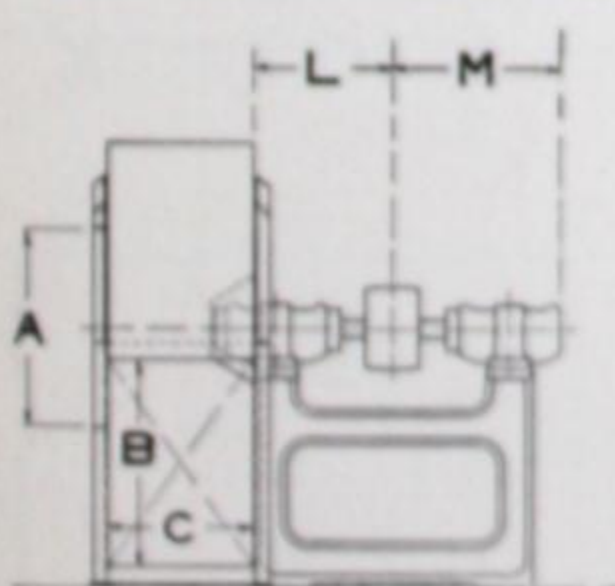
## TABLES OF DIMENSIONS IN INCHES.

### HEAVY PATTERN.

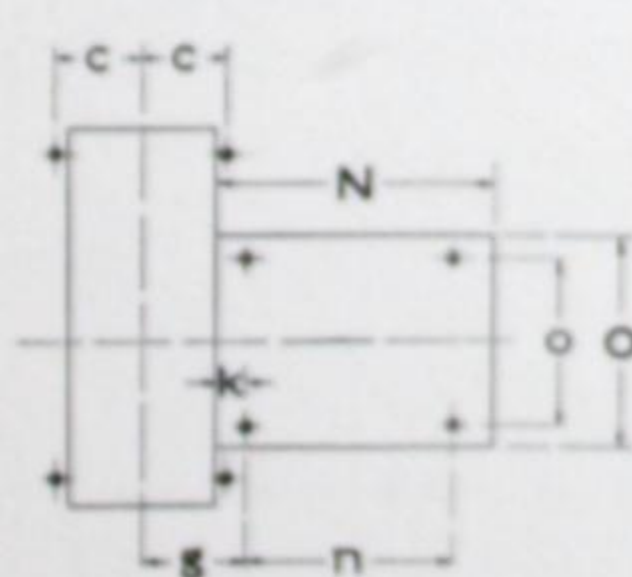
Size No.	Inlet	Outlet		D	E	F	G	L	M	N	O	P	Q	R	S	c	d	e	f	g	k	n	o	p	Diam. of fixing holes.
	A Dia.	B Deep	C Wide																						
4	8	8½	6	6½	8½	7½	11	9½	8½	16	10	9½	11	11	11	3½	5	7	6	5½	2	12	7	8	½
5	10	10½	7½	8½	11	9½	13½	10½	9½	19	12	12½	13½	13½	13½	4½	6½	9½	8	5½	2	15	9	10½	½
6	12	12½	9	10	13	11½	15½	10½	9½	19	12	14½	15½	15½	15½	5½	8	11	9½	6½	2	15	9	12½	½
7	14	15	10½	11½	15½	13½	18½	10	11½	20	15	17	18½	18½	18½	6½	9½	13½	11½	7½	2	15	12	15	½
8	16	17	12	13½	17½	15½	21	10	11½	20	15	19½	21	21	21	7½	9	15½	13	8½	2	15	12	17½	½
9	18	19	13½	15½	19½	17½	23½	10½	13½	21	15	22	23½	23½	23½	7½	9	17½	15	8½	2	17	12	19½	½
10	20	21	16	17	22	19½	26½	10½	13½	21	15	24½	26½	26½	26½	8½	11	19½	17	9½	2	17	12	22	½
11	22	23	16½	18½	24½	21½	29	12	14½	24	18	26½	29	29	29	9½	12½	21½	18½	10½	2½	19	14	24	½
12	24	25	18	20½	26½	23½	31½	12	14½	24	18	29½	31½	31½	31½	10½	12½	23½	20½	11½	2½	19	14	26	½
13	26	27	19½	21½	28½	25½	34	15	18	30	24	31½	34	34	34	11½	14	25½	22	13½	3½	23	19	28½	1
14	28	29½	21	23½	30½	27	36½	15	18	30	24	34	36½	36½	36½	12	15	27	23½	14½	3½	23	19	30½	1½

### LIGHT PATTERN.

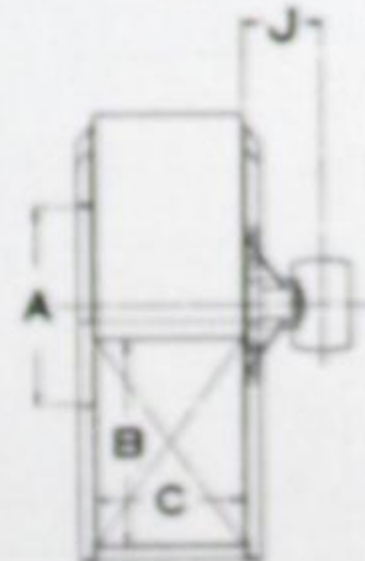
Size No.	Inlet	Outlet		D	E	F	G	J	P	Q	R	S	c	d	e	f	p	Diam. of fixing
	A Dia.	B Deep	C Wide															
4	8	8½	6	6½	8½	7½	11	6½	9½	9	8	10	3½	2½	7	6½	8	½
5	10	10½	7½	8½	11	9½	13½	6½	12½	11	9½	12½	4½	2½	9½	8	10½	½
6	12	12½	9	10	13	11½	16	6½	14½	13	11½	14½	5½	2½	11	9½	12½	½
7	14	15	10½	11½	15½	13½	18½	8	17	15	13½	16½	6½	4½	13½	11½	15	½
8	16	17	12	13½	17½	15½	21	8½	19½	17	15	19	7½	4½	14	13	17½	½
9	18	19	13½	15½	19½	17½	23½	8½	22	19½	17	21½	7½	4½	16	15	19½	½
10	20	21	15	17	22	19½	26½	8	24½	21½	19	24	8½	6½	18	17	22	½
11	22	23	16½	18½	24½	21½	29	8½	26½	23	20½	26½	9½	6½	21	18½	24	½
12	24	25	18	20½	26½	23½	31½	8½	29½	25½	22½	28½	10½	6½	23½	20½	26	½
13	26	27	19½	21½	28½	25½	34	8½	31½	27½	24½	31	11½	8½	25½	22	28½	1
14	28	29½	21	23½	30½	27	36½	8½	34	29½	26	33	12	8½	27½	23½	30½	1½



HEAVY PATTERN



FOUNDATION PLAN



LIGHT PATTERN



FOUNDATION PLAN

NOTE.—Only 6 Bolts are used on sizes Nos. 4 and 5, no Base Angle being fitted on the Bracket side of these Fans.

MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.



## CYCLONE

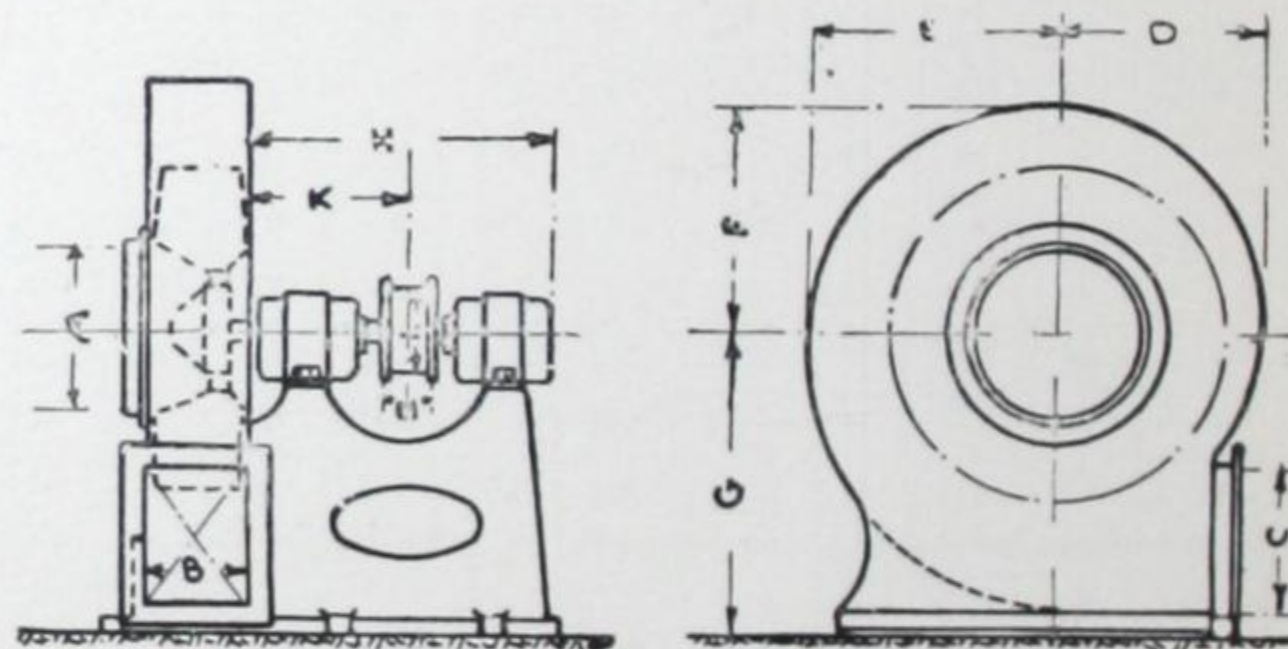
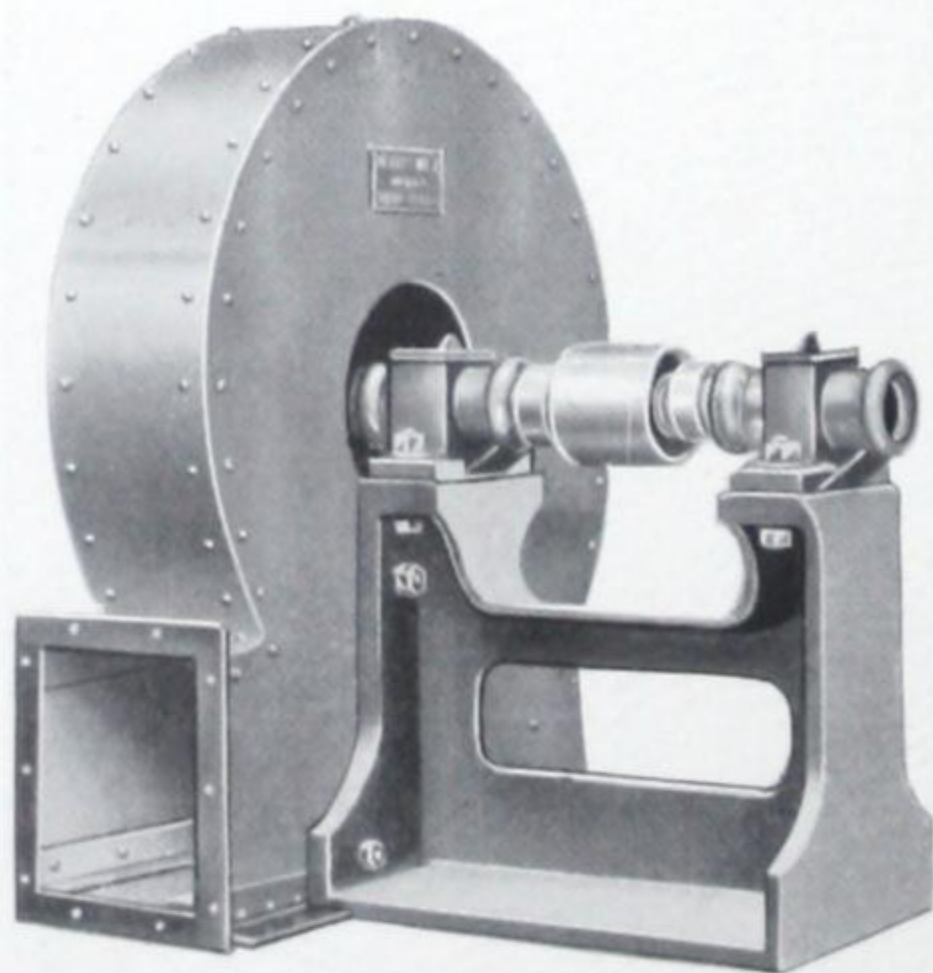
### PRESSURE BLOWER AND EXHAUSTER FOR FORGES, CUPOLAS, GAS PLANTS, ETC.

**T**HIS particular Fan has been specially designed for all purposes where a small volume at a high pressure is required.

The Casing is built entirely of mild steel, with angle iron stiffener at base, and great care is taken in the construction to ensure smooth running at the high speeds necessary to give the required output.

The Bearings are also well adapted for their work, being of the self-aligning, babbitted, ring-oiling type.

A modified arrangement of this Fan is used for exhausting gas in conjunction with Gas Producing Plants, when the Inlet and Outlet are fitted with drilled flanges to facilitate the attachment of gas pipes, and a gun-metal stuffing gland is fixed to the side of the casing where the shaft passes through, so as to prevent the escape of gas. They can be arranged with pulley for belt driving or fitted with direct coupled electric motor.



DIMENSIONS IN INCHES

Size	A	B	C	D	E	F	G	H	K	L	M
3	4½	3	4	6	7	6½	8¾	13½	6⅞	3	2
4	6	4	5	7½	9½	8¾	11½	13½	6⅞	3	2
5	7½	5	6¼	9½	11½	10½	13¾	16¼	8¼	4	2½
6	9	6	7½	11¾	13¾	12¾	16¾	16¾	8½	5	3
7	10½	7	8¾	13¼	16¼	14¾	19¾	19½	9⅞	6	3½
8	12	8	10	14¾	18½	16¾	21⅞	20	10½	7	4
10	14	10	12½	19	23	21	28	24	12	8	4½
12	18	12	15	22¾	27¾	25¼	33¼	33½	17	10	6

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



## CYCLONE

### ELECTRIC FORGE BLOWER

**T**HIS combination has been specially designed for the purpose of supplying the blast for individual Smiths' Fires and for similar purposes where a high pressure is necessary such as small Furnaces, etc. It consists of a split cast-iron casing to one side of which is bolted, by means of a special end cover, the electric motor. The impeller is **cast in Aluminium** and is keyed direct on to the motor spindle which projects into the casing. The blower is designed to give **8" water gauge** pressure at the low speed 2,750 R.p.m. and is supplied for either **direct** or **alternating** current. Two sizes of motors are fitted, the smaller when the blower is for use for a  $1\frac{1}{4}$ " diameter tuyere (which is the most common) and the larger when it is for use for  $1\frac{1}{2}$ " to 2" diameter tuyeres.

**In all cases** the motors are **totally enclosed** and run on **ball bearings**, therefore requiring the minimum of attention.

The blast can be controlled if desired in the case of D.C. machines, by a regulating switch instead of by the usual valve, which is, of course, indispensable to the A.C. machines.

When ordering please state size of Tuyere and give particulars of current supply.

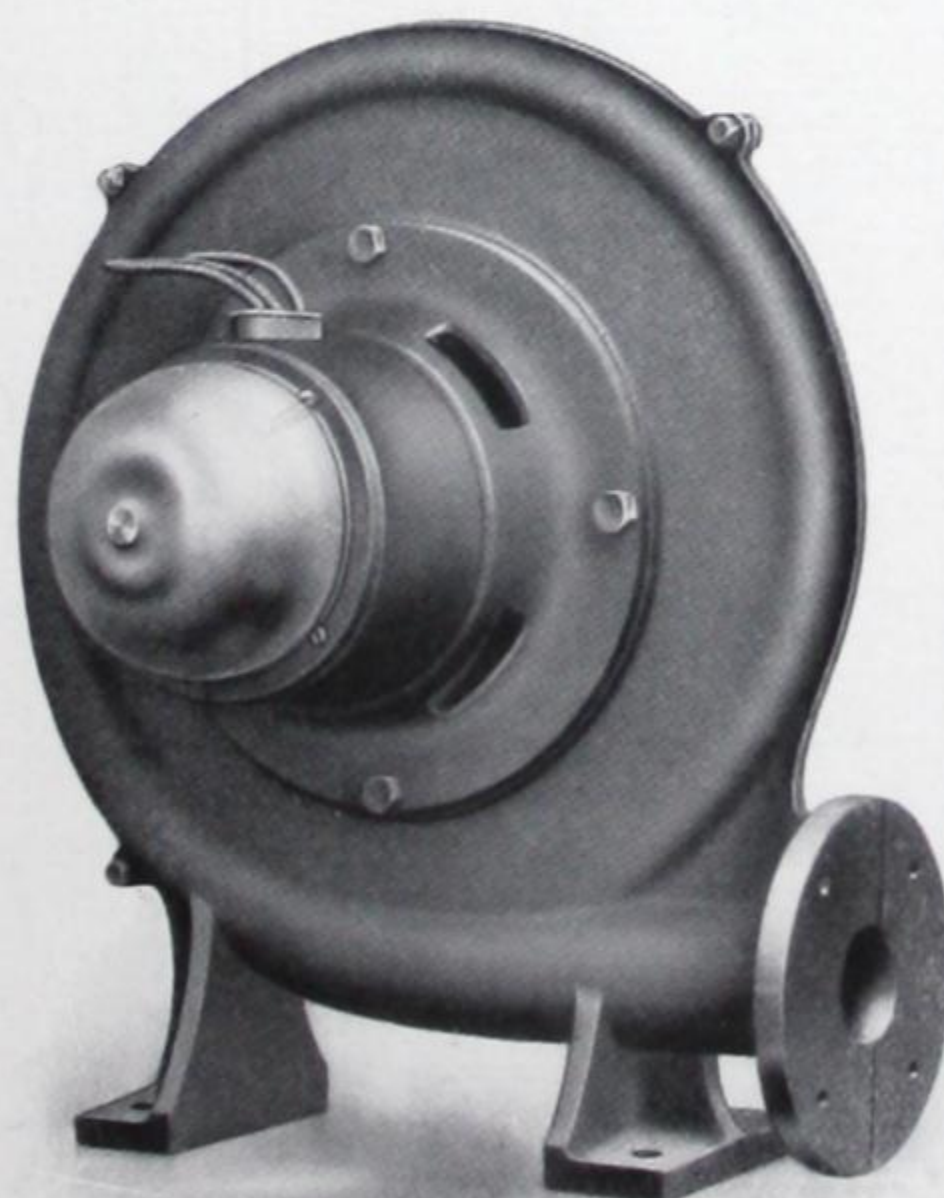
#### **Special Features:—**

Low Running Cost.

Absolute reliability.

Requires minimum of attention.

Will run continuously.



Diameter of Tuyere  
 $1\frac{1}{4}$ "

Power required  
450 watts.

Diameter of Tuyere  
 $1\frac{1}{2}$ " to 2"

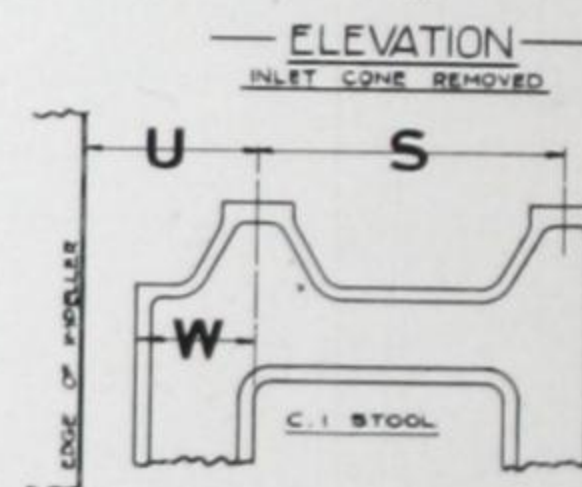
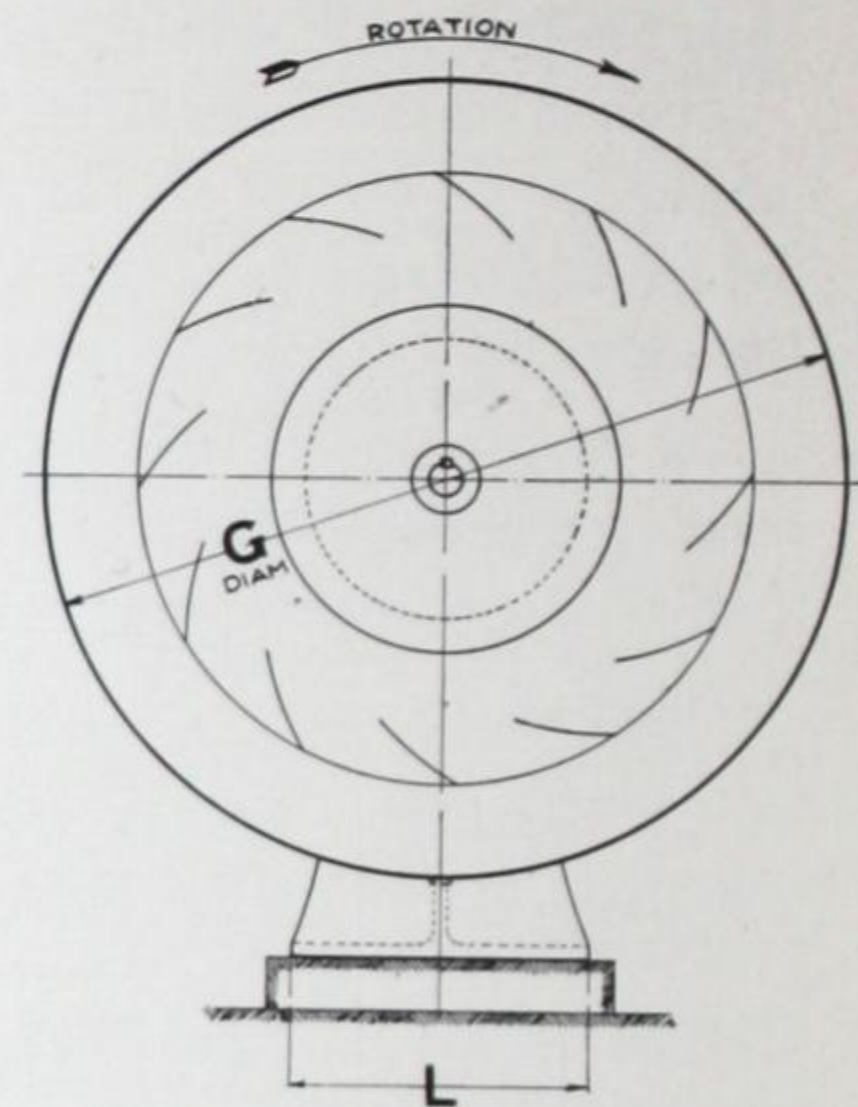
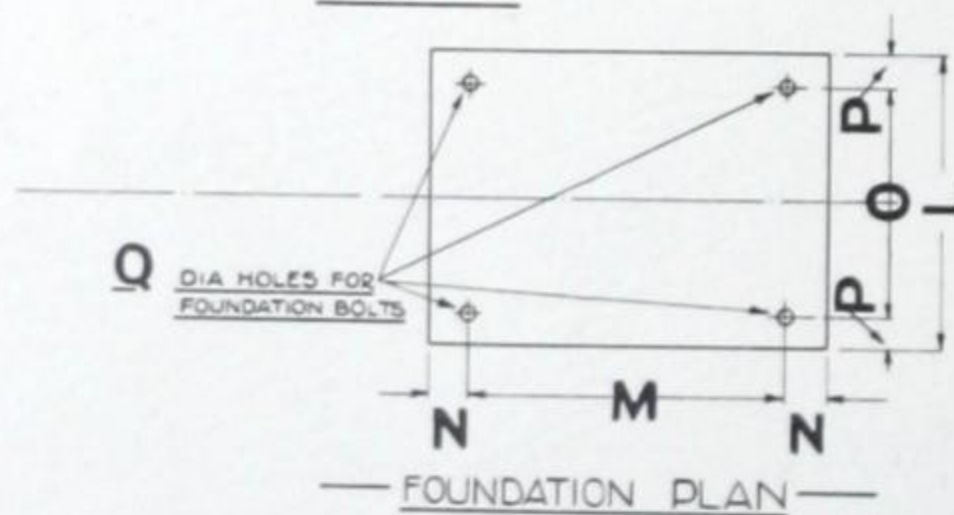
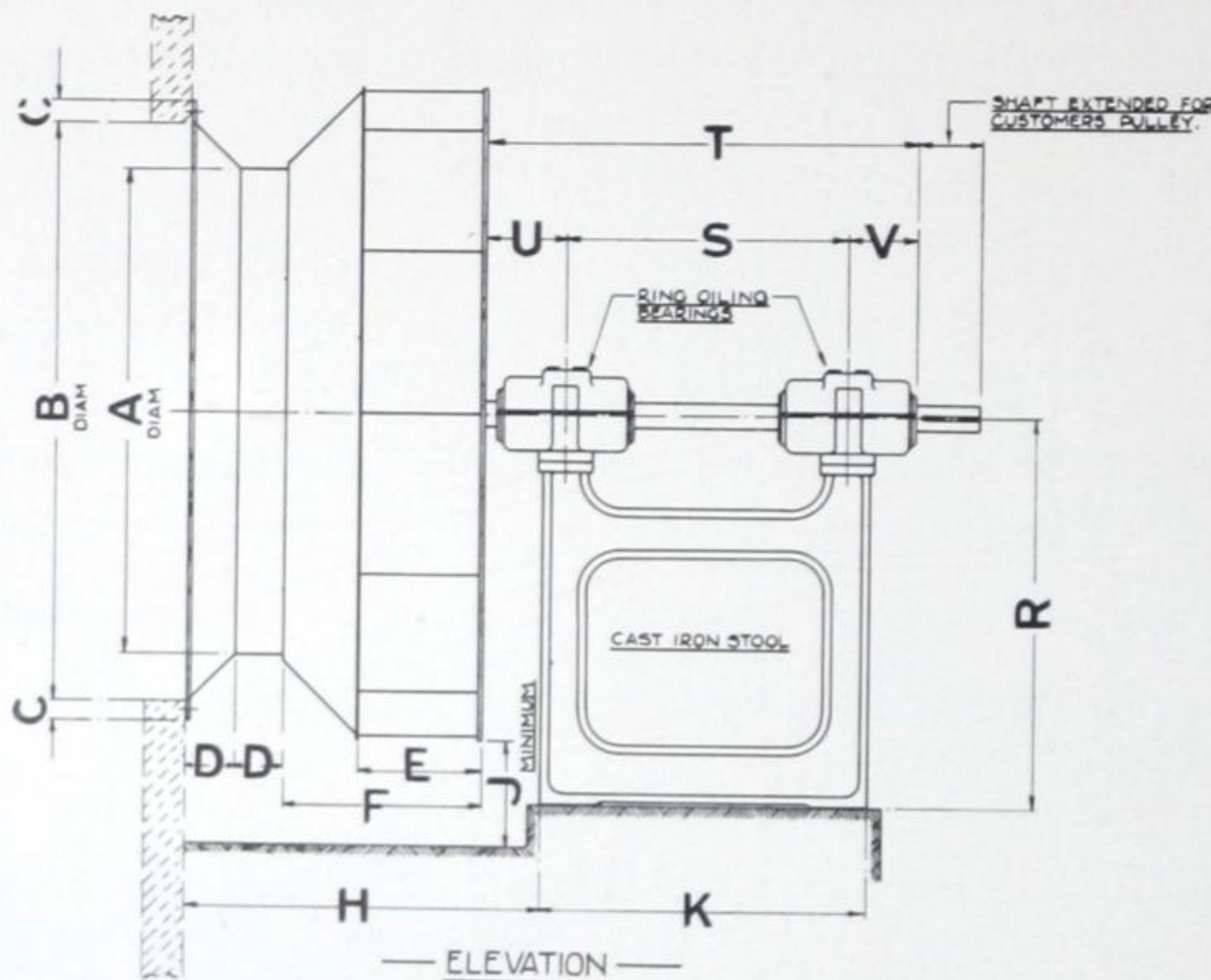
Power required  
650/1,150 watts.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



# CYCLONE

## C.B. CENTRIFUGAL FANS—OPEN TYPE



This detail applies on Sizes 12" to 21" only.

Dimension **W** =  $3\frac{9}{16}$ " for 12" Fans.

Dimension **W** =  $4\frac{1}{8}$ " for 15", 18" and 21" Fans.

DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	F	G	H	J Min.	K	L	M	N	O	P	Q	R	S	T	U	V
12"	12	14 $\frac{7}{16}$	1	1 $\frac{7}{16}$	3 $\frac{1}{8}$	5	16 $\frac{1}{2}$	8 $\frac{1}{2}$	3	16	10	12	2	7	1 $\frac{1}{2}$	8 $\frac{1}{8}$	11 $\frac{3}{4}$	11 $\frac{3}{8}$	19 $\frac{5}{8}$	4 $\frac{5}{8}$	3 $\frac{5}{8}$
15"	15	18	1	1 $\frac{1}{2}$	3 $\frac{7}{8}$	6 $\frac{3}{8}$	20 $\frac{1}{2}$	10 $\frac{3}{8}$	3	19	12	15	2	9	1 $\frac{1}{2}$	8 $\frac{1}{8}$	13 $\frac{7}{8}$	13 $\frac{1}{2}$	22 $\frac{1}{4}$	5 $\frac{1}{8}$	3 $\frac{5}{8}$
18"	18	21 $\frac{5}{16}$	1	1 $\frac{13}{16}$	4 $\frac{11}{16}$	7 $\frac{5}{8}$	24 $\frac{1}{2}$	12 $\frac{1}{4}$	4	19	12	15	2	9	1 $\frac{1}{2}$	8 $\frac{1}{8}$	13 $\frac{7}{8}$	13 $\frac{1}{2}$	22 $\frac{1}{4}$	5 $\frac{1}{8}$	3 $\frac{5}{8}$
21"	21	25 $\frac{3}{16}$	1 $\frac{1}{4}$	2 $\frac{3}{16}$	5 $\frac{7}{16}$	8 $\frac{3}{4}$	28 $\frac{1}{2}$	14 $\frac{5}{16}$	4	19	12	15	2	9	1 $\frac{1}{2}$	8 $\frac{1}{8}$	16 $\frac{5}{8}$	13 $\frac{1}{2}$	23 $\frac{1}{8}$	5 $\frac{1}{2}$	4 $\frac{1}{8}$
24"	24	28 $\frac{11}{16}$	1 $\frac{1}{4}$	2 $\frac{11}{16}$	6 $\frac{11}{16}$	9 $\frac{11}{16}$	32 $\frac{1}{2}$	18 $\frac{1}{8}$	4	20	15	16	2	12	1 $\frac{1}{2}$	8 $\frac{1}{8}$	19	16 $\frac{3}{4}$	25 $\frac{7}{8}$	5	4 $\frac{1}{8}$
27"	27	32 $\frac{3}{8}$	1 $\frac{1}{4}$	2 $\frac{11}{16}$	6 $\frac{15}{16}$	11 $\frac{7}{16}$	36 $\frac{1}{2}$	20 $\frac{3}{16}$	6	20	15	16	2	12	1 $\frac{1}{2}$	8 $\frac{1}{8}$	21 $\frac{1}{2}$	16 $\frac{3}{4}$	25 $\frac{7}{8}$	5	4 $\frac{1}{8}$
30"	30	36	1 $\frac{1}{2}$	3	7 $\frac{3}{4}$	12 $\frac{3}{8}$	40 $\frac{1}{2}$	22 $\frac{1}{2}$	6	21	15	17	2	12	1 $\frac{1}{2}$	7 $\frac{1}{8}$	24 $\frac{1}{4}$	17 $\frac{3}{4}$	28 $\frac{1}{2}$	5 $\frac{3}{4}$	5
36"	36	43 $\frac{3}{16}$	1 $\frac{1}{2}$	3 $\frac{11}{16}$	9 $\frac{1}{4}$	14 $\frac{3}{4}$	48 $\frac{1}{2}$	26 $\frac{1}{16}$	9	24	18	19	2 $\frac{1}{2}$	14	2	7 $\frac{1}{8}$	29 $\frac{1}{2}$	20 $\frac{3}{4}$	31 $\frac{1}{2}$	5 $\frac{3}{4}$	5
42"	42	50 $\frac{7}{16}$	1 $\frac{1}{2}$	4 $\frac{7}{16}$	10 $\frac{13}{16}$	17 $\frac{5}{16}$	56 $\frac{1}{2}$	31	12	30	24	23	3 $\frac{1}{2}$	19	2 $\frac{1}{2}$	1	34 $\frac{3}{4}$	26 $\frac{1}{4}$	39 $\frac{7}{16}$	7 $\frac{1}{8}$	6 $\frac{1}{16}$
48"	48	57 $\frac{5}{8}$	1 $\frac{3}{4}$	4 $\frac{13}{16}$	12 $\frac{3}{8}$	19 $\frac{7}{8}$	65	34 $\frac{3}{4}$	12	30	24	23	3 $\frac{1}{2}$	19	2 $\frac{1}{2}$	1	37 $\frac{1}{8}$	26 $\frac{1}{4}$	39 $\frac{7}{16}$	7 $\frac{1}{8}$	6 $\frac{1}{16}$
54"	54	64 $\frac{11}{16}$	1 $\frac{3}{4}$	5 $\frac{13}{16}$	13 $\frac{7}{8}$	22 $\frac{1}{8}$	73	39 $\frac{3}{4}$	15	30	24	23	3 $\frac{1}{2}$	19	2 $\frac{1}{2}$	1	37 $\frac{1}{2}$	26 $\frac{1}{4}$	41 $\frac{7}{16}$	8 $\frac{11}{16}$	6 $\frac{1}{2}$
60"	60	72	1 $\frac{3}{4}$	6	15 $\frac{3}{8}$	24 $\frac{3}{8}$	81	42 $\frac{1}{16}$	15	42	36	34	4	28	4	1 $\frac{1}{4}$	41 $\frac{1}{4}$	35 $\frac{1}{2}$	50 $\frac{11}{16}$	8 $\frac{11}{16}$	6 $\frac{1}{2}$

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# CYCLONE

## OPEN TYPE C.B. CENTRIFUGAL FANS

**T**HE Open Type Cyclone C.B. Centrifugal Fan is designed to move large volumes of air against low resistance heads, and is used chiefly for Extract Ventilating Systems when the resistance offered by the ductwork is too high to use a Propeller Fan and maintain silent operation.

These Fans are usually arranged for vee belt driving, but can be adapted for direct coupling to Electric Motors.

The dimensioned illustration gives a standard range of Fans as supplied for vee belt driving.

Each equipment comprises a Cyclone C.B. Impeller, which has a non-overloading characteristic, overhung on a solid mild steel shaft revolving in two Cyclone Standard babbitted inner sleeve ring oiling bearings, supported on a heavy cast iron stool. The shaft is keywayed to receive a suitable driving pulley. An inlet cone is provided with the fan to couple up to extract opening to give the correct air flow to the Fan Impeller.

These Fans are easily adapted to a Duplex arrangement by having a second impeller on the other end of the shaft.

The tables give two duties for each resistance head listed, and are tabulated at the approximate maximum efficiency points. The first duty of each size of Fan at its specified resistance should be taken as the silent running duty.

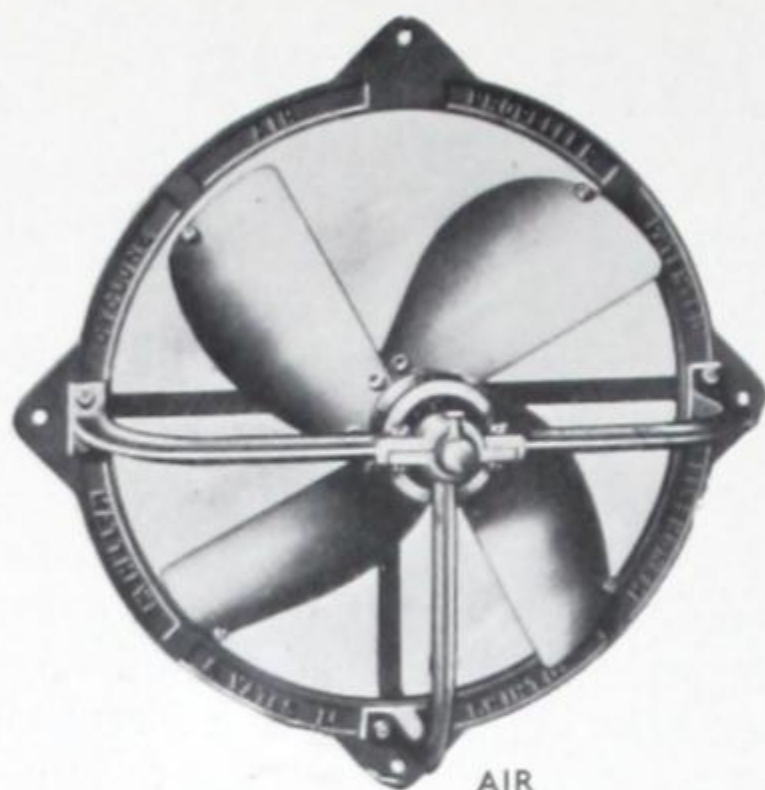
### PERFORMANCE TABLES

Size of Fan	$\frac{1}{4}$ " R.H.			$\frac{3}{8}$ " R.H.			$\frac{1}{2}$ " R.H.		
	C.F.M.	R.P.M.	B.H.P.	C.F.M.	R.P.M.	B.H.P.	C.F.M.	R.P.M.	B.H.P.
9	440	990	0.035	475	1180	0.056	600	1420	0.095
	525	1050	0.046	600	1270	0.079	700	1520	0.122
12	800	750	0.063	950	920	0.112	1100	1060	0.173
	940	820	0.082	1100	970	0.145	1350	1150	0.236
15	1250	600	0.1	1450	730	0.172	1700	840	0.27
	1475	650	0.13	1730	790	0.227	2050	920	0.36
18	1750	490	0.138	2070	600	0.245	2450	700	0.385
	2125	535	0.186	2540	660	0.333	2950	760	0.515
21	2350	420	0.185	2750	500	0.324	3200	580	0.51
	2850	460	0.25	3400	560	0.445	4050	660	0.707
24	3100	375	0.244	3600	450	0.424	4500	530	0.71
	3600	405	0.314	4400	485	0.576	5500	580	0.96
27	4100	335	0.322	4800	410	0.565	5800	475	0.92
	4800	390	0.42	5700	435	0.75	6800	520	1.2
30	5000	300	0.392	5800	370	0.685	7000	430	1.1
	5900	325	0.515	6800	400	0.89	8500	460	1.5
36	7000	248	0.55	8200	300	0.97	10000	350	1.57
	8400	270	0.74	10500	330	1.38	11800	380	2.06
42	9200	210	0.73	10650	250	1.26	13000	295	2.04
	11600	235	1.02	13800	280	1.81	16600	335	2.9
48	12000	184	0.95	13900	219	1.65	17000	258	2.67
	15200	205	1.33	18000	245	2.36	21700	293	3.78
54	15200	163	1.2	17600	194	2.08	21500	230	3.38
	19200	183	1.68	22800	218	2.98	27500	260	4.8
60	18800	147	1.48	21600	175	2.55	26500	207	4.16
	23600	165	2.06	28200	196	3.7	33800	235	5.9

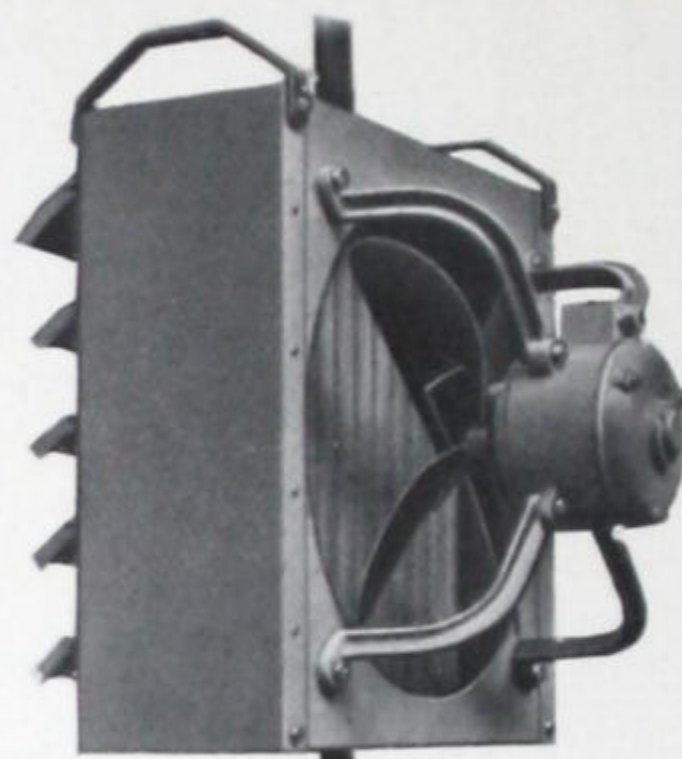
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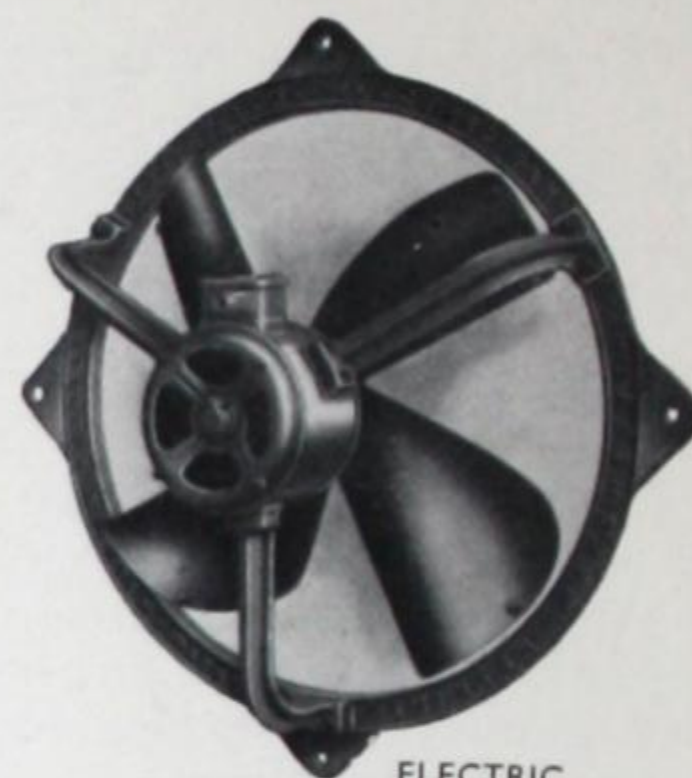
## SOME OTHER CYCLONE PRODUCTIONS



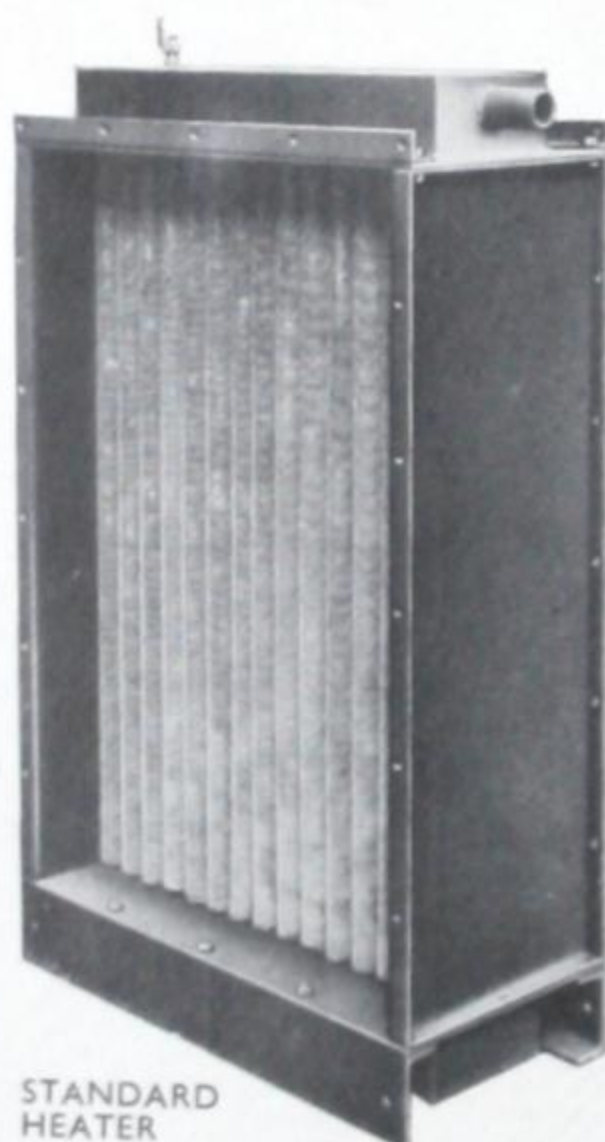
AIR  
PROPELLER



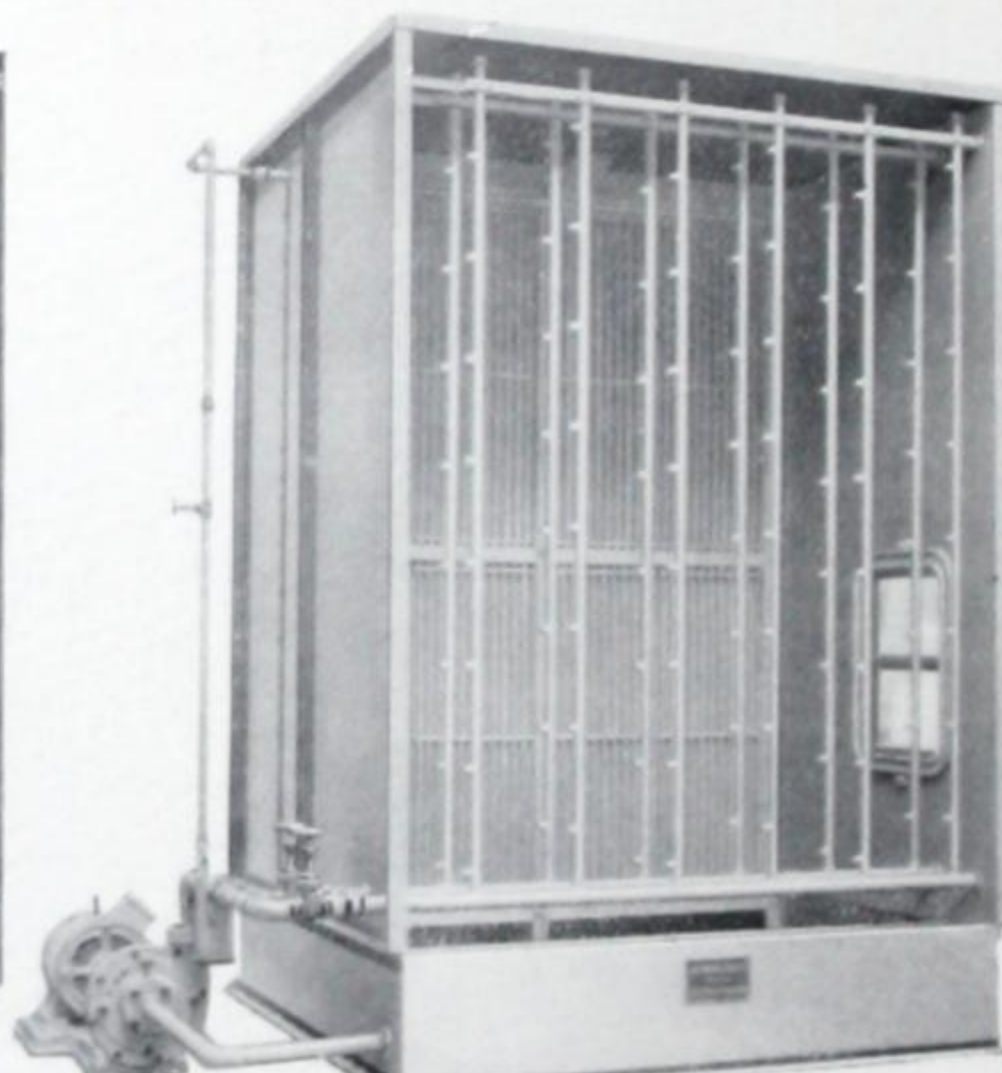
HEATER  
UNIT



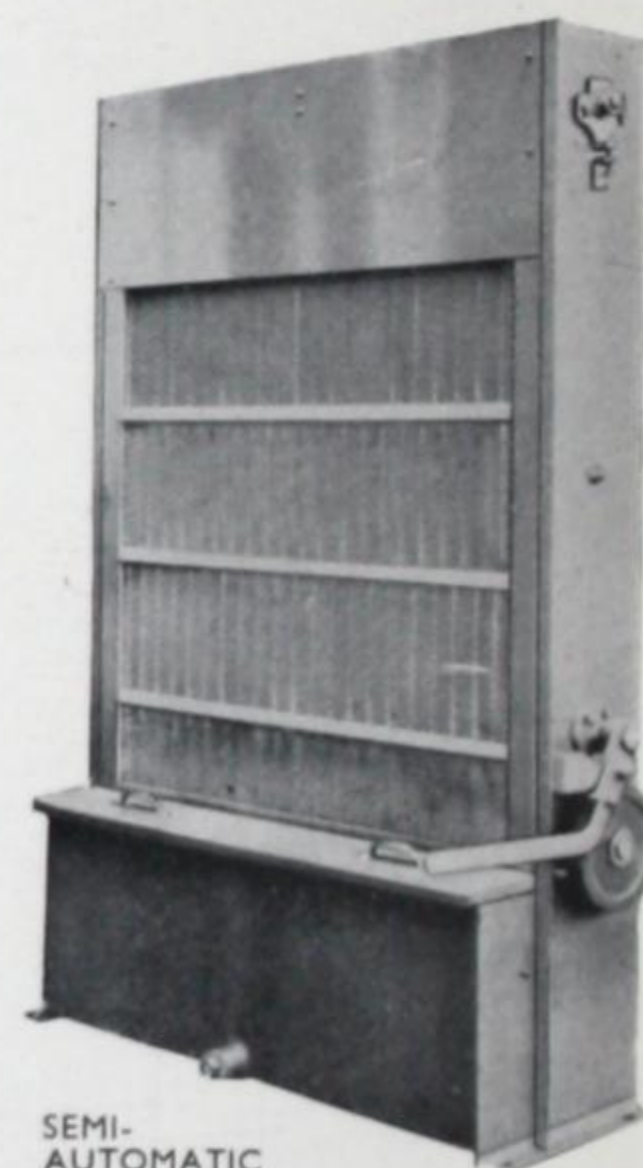
ELECTRIC  
FAN



STANDARD  
HEATER



AIR WASHER



SEMI-  
AUTOMATIC  
VISCIOUS FILTER



KILN  
ACCELERATOR



CYCLONE  
SEPARATOR



OBLIQUE  
VISCIOUS  
FILTER

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## **CYCLONE**

### **LIST OF SPECIALITIES**

**CYCLONE Multivane Fans—Back and Forward Curve.**

**CYCLONE Patent Laminated Fan Casings for Supersilence.**

**CYCLONE Paddle Blade Fans.**

**CYCLONE Air Propellers—Belt and Electric.**

**CYCLONE Copper Gilled-pipe Heaters.**

**CYCLONE Heater Units (Gilled Copper Tubes).**

**CYCLONE Viscous Air Filters.**

**CYCLONE Air Washers (Water Spray).**

**CYCLONE Humidifiers.**

**CYCLONE Air Conditioning Plant.**

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**CYCLONE Drying Machines for all Materials.**

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**CYCLONE Stove Enamelling Plants.**

**CYCLONE Conveyors—Slat, Monorail, Bucket, etc.**

**CYCLONE Acetylene Generators—Welding and Cutting Plant.**

Specialists in the design, construction and application of fans for every conceivable purpose.

**MATTHEWS & YATES LTD., ENGINEERS, SWINTON, MANCHESTER, ENGLAND.**



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